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The  
"Great Divide *and*  
*the* Tripod"



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# **"The Great Divide and the Tripod"**

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Yours -  
W. B. Eerdmans



The  
"Great Divide *and*  
*the* Tripod"

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Time, Life and Mind, Mathematical

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BY  
W. <sup>*William*</sup> BONNAR

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CHICAGO

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## PREFACE.

The subjoined series of dialogues between Janus and his son Zeno, epitomized in the "contents," are all based upon the hypothesis that TIME bears a constant mathematical relation to the universe of MATTER and ENERGY. "Time," used in this way corresponds with our ordinary conception of "eternity," in that it extends to infinity "past," and infinity "future," whilst at the same time we recognize the "present" existence of all forms of matter, and all modes of energy.

The general purport of the conversations between Janus and Zeno, is

To consider (1) What TIME is and is not.

(2) What the cause of LIFE is.

(3) What the MIND is, and its COMPOSITION, sources, and the modus operandi of its formation.

(4) Why the mind varies in the same individual at different times, and in different individuals at the same time.

(5) The relation existing between "instinct" and "subconscious" mind.

(6) How it is possible to alter the "composition" of the mind.

(7) To explain how, and why, different phases of MIND (SUBCONSCIOUS or SUBLIMINAL; HYPNOTIC; ECSTATIC; OBJECTIVE; PRIMORDIAL; DUAL mind, etc.) exist, and how any one of these varieties is related to the others.

(8) How MEMORIES are made and reproduced.

(9) Why it is necessary that there be Two sides, or halves to the brain, in order to manifest CONSCIOUSNESS.

Janus declares that the solution of these problems becomes quite simple, and easy to comprehend, when one clearly understands the meaning of the following "ratio,"—"ENERGY AND MATTER ARE RELATED TO TIME AS THE PERPENDICULAR IS TO THE HORIZONTAL,"—presuming, of course, that the reader is familiar with the fundamental principles of physical science, and has received a fair general education, and that the mind be FREE to admit elementary truths. The word "free" in this sense, means that the mind of the reader is not biased by certain "beliefs," "opinions" and "conclusions," entertained, but not verified.

Being firmly convinced that all men were created similarly, constituted, as they are of both "body and mind," differing from each other on account of the manner of the growth and development of each of these necessary elements,—being aware that the body suffers no diminution or change of weight at the cessation of LIFE and the disappearance of the mental element of the being,—and that no trace of either MIND or LIFE, can be located after they cease to manifest in the body; it therefore appears to be of prime importance to understand how these entities are related to the body during life, and how we may account for the different phases of the mind, and how mental phenomena can be explained in accordance with scientific truths and principles, which are well known and established.

The writer has endeavored to make the explanations by Janus as brief, clear, and concise as possible, carefully avoiding offensive argumentative declarations, and he has confined himself as closely as possible to the self evident hypothesis, enunciated briefly in the first chapter, and including the simplest and most reasonable deductions therefrom.

Desiring to assist in the solution of these world problems, the writer most respectfully submits the "The Great Divide and the Tripod" for your careful consideration, believing that you will find it both interesting and profitable.

Yours,

TWILIGHT.



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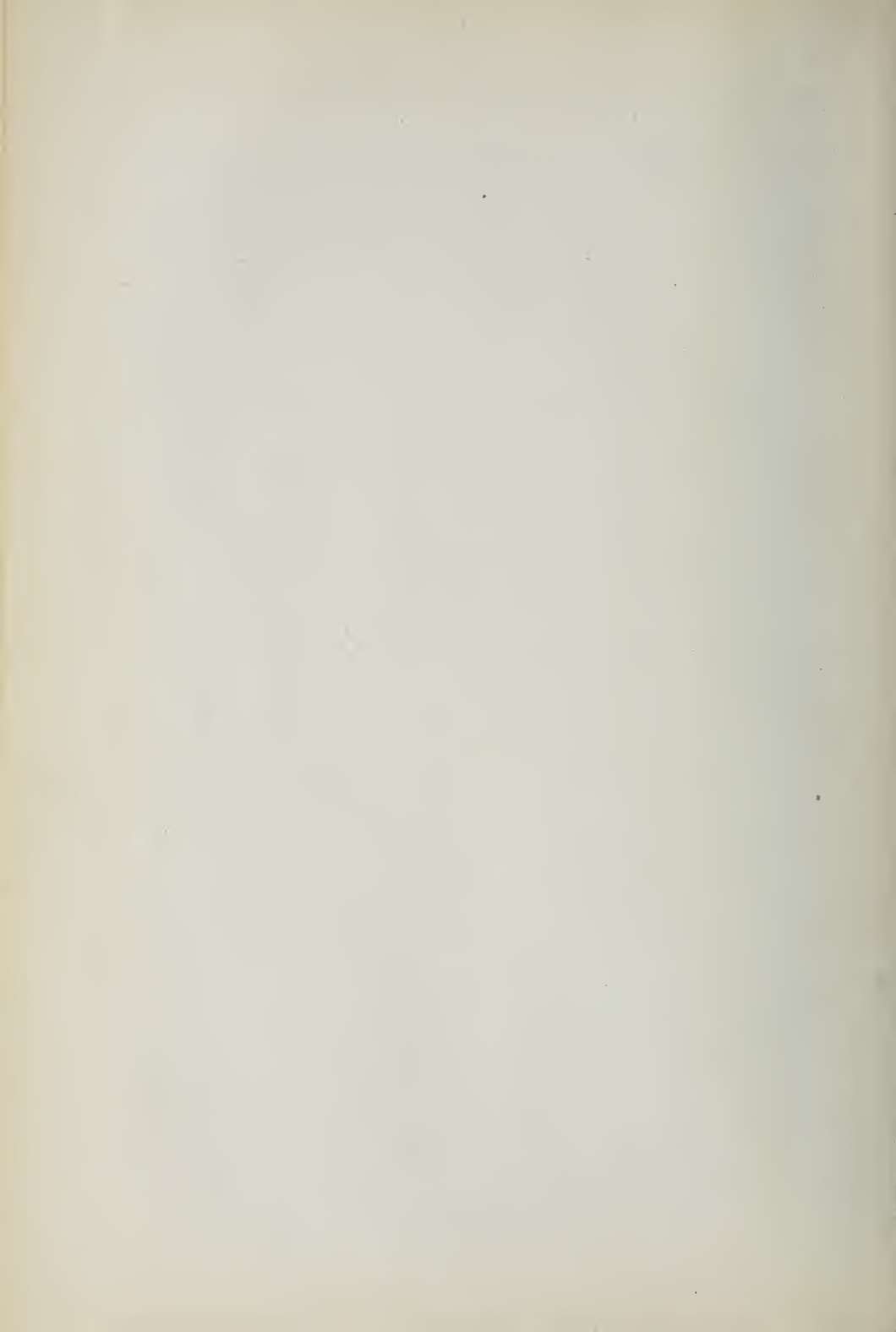
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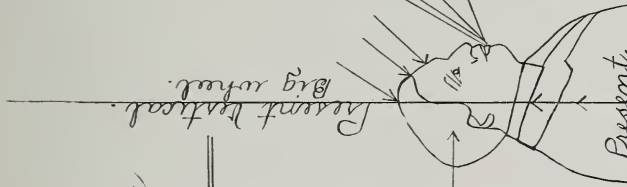




This space represents  
the "Past."

The brain is full of records  
of experiences and these  
records are memories.

"I have discovered that I cannot  
get out of the "Present Vertical," the life  
line, either living or dead."  
"I assist others to perform their duty  
by precept and example."  
"I accumulate useful knowledge by  
means of my special senses and store it in  
my brain, and by memory records."  
"I judge, and control my emotions."  
"My brain is the loom which weaves these  
sets of forces together forming "My Mind."



### The Perfect Human Mind.

Notice. The words spoken by the subject are those that correspond to  
the perfectly balanced mind, being in the "subjective" current,  
but ruled by reason.

Diagram No. 1



This space represents  
the "Past."

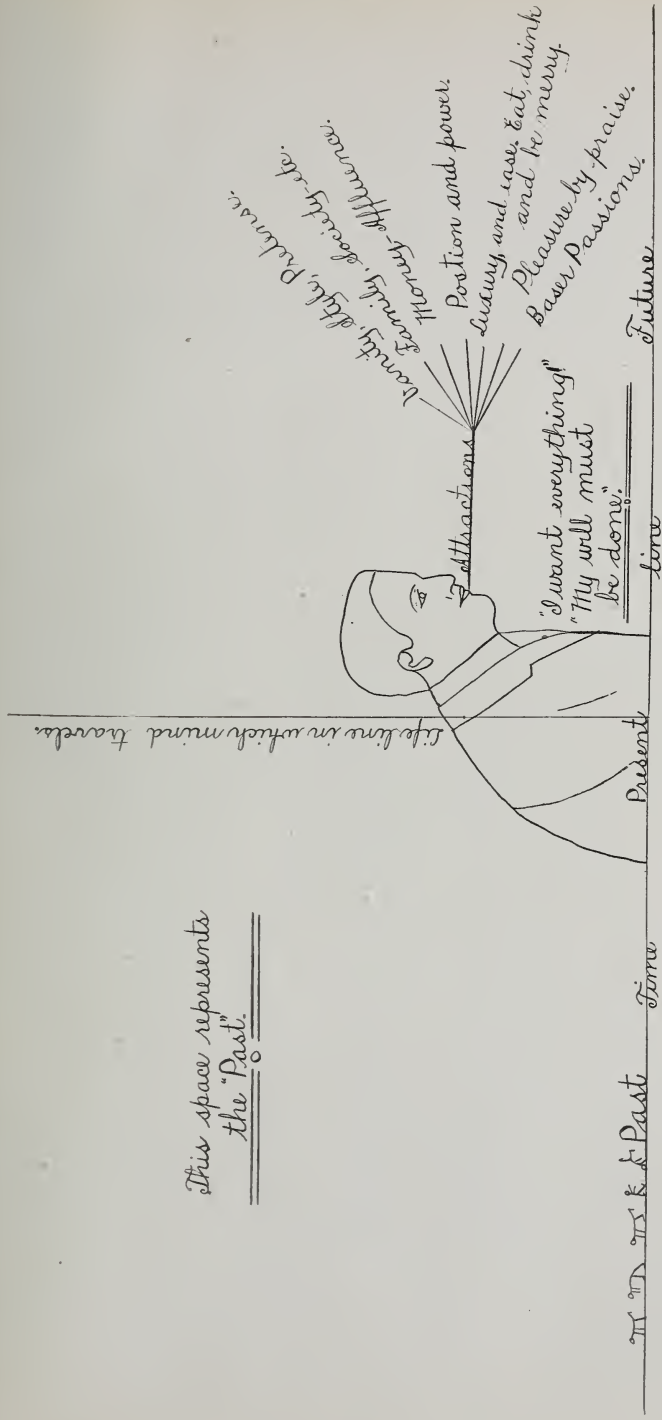


Diagram No. 2 "The Objective Mind."

"Self", in some form, has control and directivity.  
The "organic" and the "special sense" groups of impulses  
overshadow the "Primordial".

He does good to others, if he considers it will benefit self.





# SELF IS DEAD

Does Right because it is right  
 Altruism supplants Self on a fact with the rights of others.  
 "Love one another". "You are as yourself". Being the  
 desired. "Happiness" - "This is the Kingdom of Heaven".  
 "The Kingdom of Heaven is at hand".

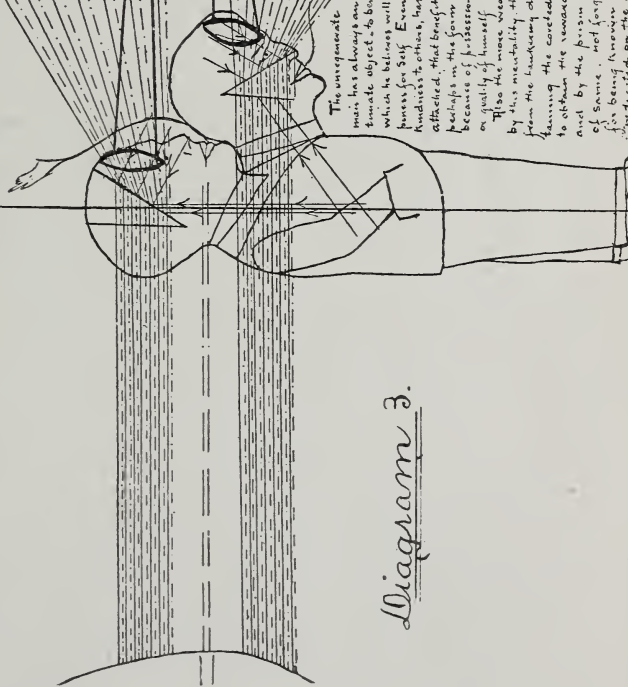


Diagram 3.

Past. Present. Future.



## CHAPTER 1.

THE LONG AXLE AND THE BIG WHEEL. JANUS GIVES ZENO, HIS SON, ONE OF HIS  
CUSTOMARY LESSONS, IN WHICH HE PROPOUNDS A NEW RATIO.

Notes by Zeno——

Janus—Well, let us proceed.

I will here make diagram No. 4, composed of straight lines. (A) is a horizontal line and supposed to be of infinite length, representing our conception of TIME.

On this line select any point and call it PRESENT TIME. Then if we regard the left hand side as representing the PAST, and the right hand side the FUTURE, it is evident that these latter two divisions are equal, because the line representing time is infinite.

In place of a single line I will draw the figure (B), which represents a surface, and figure (C), which represents a solid.

In these latter figures, the point, in figure (A) representing the present, will appear as a line in figure (B) and as a surface in figure (C), (See Diagram No. 4).

The transverse measurements of the “solid” figure are not restricted, hence it may be an inch thick or billions of miles, nevertheless there must still be the same relations retained between the divisions of time, denominated PAST, PRESENT *and* FUTURE, as that referred to in figure (A).

There is always as much “future” on the right hand side as there is “PAST” on the left hand side of the present.

Upon the “past” side of the “time measure” certain points have been selected and agreed upon by chroniclers from which to compute dates and calculate the duration of all events and all activities. Such period as the birth of Christ, 1,914 years ago, and the date of the foundation of the world, 4,004 years previously, have been selected for this purpose.

It is not necessary that either of these periods be correct, absolutely, but, because they have been agreed upon, they serve the purpose, and are quite as satisfactory, as a basis for calculations involving periods and durations, as if they were really correct.

The daily revolution of the earth upon its axis, and its annual revolution around the sun, being maintained in regular sequence, occupying a specific duration for each event, whilst continuing simultaneously, each being completed at constantly recurring periods with reference to each other, afford a mathematically correct basis for comparison, and from the divisions of time, thus presented, all other calculations can be computed and estimated.

Observe that the position of the “present” in Fig. C, Diagram 4, with reference to the other divisions of the line of time, appeals to our conception

as if occupying a very narrow space, or as a surface between two abutting equal "solids," and its extent corresponding with the transverse measurement of the "solid."

In Fig. (B) the "present" appears as a line.

From the way we reckon time it appeals to one's mind as if the present was continually passing from the past to the future, increasing the length of the past, and to the same extent, encroaching upon the future. Nevertheless the future is not made shorter nor is the "past" lengthened, because the line representing time is of infinite length, therefore the past and the future remain the same length respectively, and are always equal to each other.

If a person travels east and from the west, there is always as much east before him as there is west behind him, no matter how far the journey may have extended, or how swiftly he traveled.

In the same way there is always just as much future ahead of us as there is past behind us. This is because both space and time (eternity) are infinite, and it makes no difference how long or how rapidly the present may appear to have moved from the past, or how much it has seemed to have encroached upon the future.

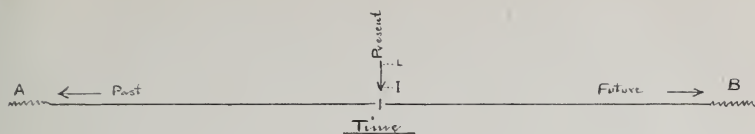
A hypothetical measure is just as accurate and serviceable as one which we could handle, if the hypothesis is mathematically correct, in fact in many cases a hypothetical instrument is the only kind that could be used. Accordingly we may consider a hypothetical measure as extending across the universe, even if no boundary can be conceived of, simply because we have a conception of INFINITY as that which has no end, and even although it is impossible to define infinity except as a conception. Hence our conception of the duration of the PAST is equal to our conception of the duration of the FUTURE, both being arbitrary divisions of the line of time meeting together at the PRESENT.

Upon any of these hypothetical measures, after assuming a fixed point from which to commence calculations, all periods, dates and the duration of all activities can be estimated, even to the most minute fraction of a second or to the most prolonged period of years.

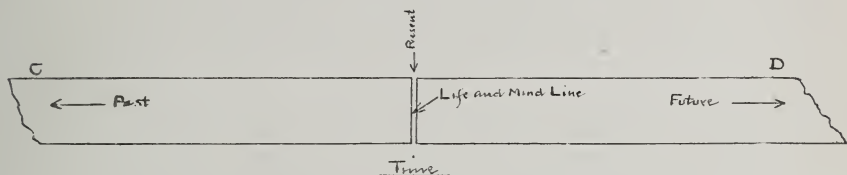
The great advantage gained by the hypothetical straight line, surface or "solid," with which to measure time, is that it affords us an accurate mathematical basis upon which we can erect another line or "surface" at exactly right angles to the straight line representing TIME.

Increase the size of our "solid" measure until it is as wide as the universe, and let the surface representing the present extend transversely across it, we will find that the hypothetical "surface" contains everything that is in the universe, because everything that is in the universe is always strictly IN the present.

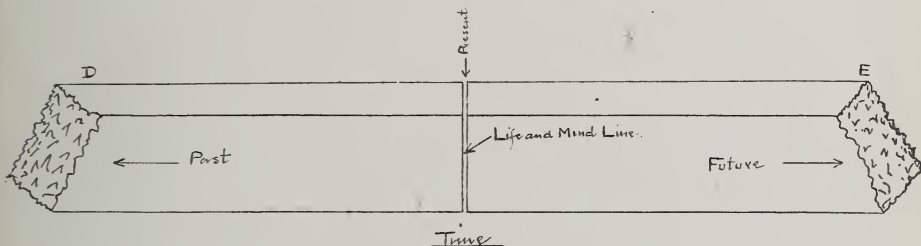
Now we will denominate the "vertical surface" THE "PRESENT VERTICAL"; we have accordingly two entirely different lines or figures at exactly right angles to each other—the TIME line serves us as an instrument with



Represented by a straight line.



Represented by a straight elevated surface.



Represented by a straight solid.



The Moving Finger writes, and  
 having writ  
 Moves on; nor all your Piety nor  
 Wit  
 Shall lure it back to cancel half a  
 Line.

— o — *Amor.* *Quintus* *Poet*





which to measure time and the vertical surface serves us with the means of locating all things as regards TIME.

The "vertical present" contains all kinds and conditions of MATTER, all modes of energy or force, all life, without regard to what kind of creature bears it, all MIND and the phases thereof, any or all spirits which may be conceived to exist, the Creator, Evolver or any form or nature of any deity which has been conceived of by man or any other creature, can only be discovered strictly IN the "present vertical," in short, the "present vertical" contains the results of all that ever occurred, and the cause of all that will occur—everything that is.

We cannot recede nor advance from the present, because we cannot alter the relation existing between the present and the past, nor the present with the future, one remaining on each side of the present forever: Hence old Omar Khayyam, the ancient Persian poet and tentmaker, said:

"The moving finger writes, and having writ,  
Moves on,—nor all your piety nor wit  
Shall lure it back to cancel half a line."

When tomorrow comes it will be present; we have no access to the past, except as a memory of impressions which were created in terms of the present, and even the records which afford us the memories are themselves in the present.

The fact that anything which was created, or made, millions of years ago, becomes evident to us at the present cannot be adduced as evidence that the past exists at present; nor because we are confident that the earth will continue to fly around the sun for a million years to come. This cannot serve to prove that there is a future NOW in existence or ever can be except as an anticipation.

"EXISTS" is in the present tense, and completely excludes both past and future. If it were not so we could have a past at present and a future and present existing at one and the same time, which, of course, is absurd and impossible.

One side of the hypothetical "vertical present," may be properly considered as "facing to past" and the other side of it as "facing the future," whilst the "vertical present" appeals to the conception as an extended wheel, as wide as the universe, within which all matter and energy, life and mind permanently remain.

You should constantly bear in mind that the hypothetical time measure passes exactly at right angles to the "vertical plane," which I called the "vertical present," hence the TIME measure line might be properly regarded as an axle to the wheel, which is the vertical plane, even although there is neither past nor future in existence except in the mind of the chronicler. The "long axle" time measure is merely a convenient hypothetical conception, by means of which all dates, periods, durations and activities may be estimated.

Being possessed of this simple mathematical relationship, we are at once in a position to place MIND and its PHASES and energy with its modes, upon an absolutely correct and very convenient basis, and by means of this hypothesis we become able to formulate a set of mathematically correct ratios, which will serve to demonstrate definitely the relationship existing between all kinds of mentalities, in such a manner that we can understand many psychic phenomena, including hypnotism, ecstasy, dual mind, instinct, objective and subjective mind in their relation to each other and to time.

The ratio expressing the relation of matter and energy to time is expressed by the following formula:

“MATTER AND ENERGY ARE TO TIME AS THE PERPENDICULAR IS TO THE HORIZONTAL.”

Or, if we think of MIND and LIFE as energies, we would say—

“EITHER MIND OR LIFE IS TO TIME AS THE PERPENDICULAR IS TO THE HORIZONTAL.”

NOTICE, in the latter of these ratios, that LIFE represents matter and MIND represents energy, because mind is a form of energy, and it is never recognized independent of matter; nor can life manifest independent of matter.

Zeno—I can understand the ratios, but I do not quite understand how you make it appear that there is neither past nor future, and then present both in the one line representing time; for if there is only one line, which is one thing, it would be impossible to select a part and call it “present,” for by doing so you must divide the time line. And if you divide it there would only be two parts to it, and then there would be no place for the part which you admit exists, and that is the PRESENT. It would seem to me, even with the hypothetical measure, you must allow one part for the present, in any event, and if you allow any division and one part must be the present, therefore the “time line” would have THREE parts to it.

Janus—Suppose you stood upon the “time line” at the point “present”; your position on the line does not break it, for it would still remain continuous. It is our position in the hypothetical “time measure” which we recognize as “present time.”

If you could remain standing on the line representing time and allow the earth and all the heavenly bodies to move along, as they do, without any noise or commotion, passing across the heavens in one direction, would you not think that you were moving in the opposite direction? In exactly the same way, if you sit in a train which remains perfectly still, whilst another train is moving along close by your car, you think that it is your own car that is moving.

Zeno—But according to that conception the time measure is really nothing but our own measure for distance which the earth and heavenly bodies move. Is that the idea?

Janus—Yes, that is the correct idea. There is no such a thing as time at

all, it is only our conception of the relativity of events—the sum of the duration of activities taken continuously—all occurring in PRESENT time, that we regard as TIME.

The very same idea was expressed by Aristotle in ancient times when he said, “Time is but the ‘measure’ of the duration of things that exist in succession, caused by the motion of the heavenly bodies.”

Again, Camille Flammarion, the great French astronomer, yet living, said, “Know that time is not an absolute reality, but only a transitory ‘measure’ caused by the movement of the earth in the solar system.”

Zeno—By such a system the “present” is forced out of existence altogether, yet we know that we live in the present, hence you must account for it in some way.

Janus—I account for it in exactly the same way as we account for the sensation of light and sound and other mental sensations, perceptions and conceptions.

LIGHT is not a thing in existence in itself. The vibrations generated in the sun, for instance, are perfectly dark, and they are dark all the way as they travel from the sun to our eye and brain, and when they reach the MIND is the very first time in all their course where there is any light whatever.

The eye and brain have the power to so separate and combine the vibrations that they excite that sensation which our consciousness regards as “light.” To the blind eye there is no such a thing as light, although the vibrations come to the blind man in the same way and of the same kind as they are and do to the person with good eyes, yet it is not the eye which makes the light, nor does it let the light shine in, because all it lets in are certain vibrations, but vibrations are not LIGHT.

Again, there is really no sound in the piano which we think makes the music. The vibrations of the wires are perfectly soundless, and there is no sound all the way right from the wires to the ear and brain; only as the vibrations are accumulated and properly distributed in the brain are they transformed into music, and become appreciated by consciousness as sound. We of course refer the sound to the place of origin of the vibrations, simply because we have learned that certain vibrations, originating at a certain distance, in a certain direction, produce the series of impressions which consciousness perceives as “sound.” It is exactly the same way with regard to the movement of the earth and heavenly bodies, producing the mental conception of “time.”

Thus TIME is due to the sensation which we perceive of the vibration or movement of the earth and other heavenly bodies afloat in the universe.

The VIBRATIONS producing time are immensely slower than the vibrations which we recognize as producing light and sound; nevertheless, they are due to the same kind of cause, viz., MOTION.

The different sensations are due to the LENGTH of the vibrations, the



rapidity of the vibrations, and the structure of the organ of sense which receives them.

Compare the length of the vibrations of light. There are 38,000 to the inch in "red" light, 42,000 to the inch for "orange," 46,000 to the inch in "yellow," 50,000 to the inch in the "green," 54,000 in "blue," 58,000 in "indigo" and 62,000 in "violet." When the waves get shorter than that they produce no impression on our eyes, but still they are "light" (invisible light). The sensitive photographic plates see them, and under the name of CHEMICAL RAYS they have been traced down to 250,000th of an inch.

Yet far below this in the scale there are other smaller waves. When we get down to the 250,000,000th of an inch we find the X ray. THE LENGTH OF THE X RAY IS LESS IN COMPARISON WITH AN INCH THAN AN INCH IN COMPARISON TO THE DISTANCE FROM NEW YORK TO THE NORTH POLE. The length of an X ray wave compared with an average wave of visible light is about as an inch to a mile. But this is not the bottom of the list of short waves by any means. The diameter of a "corpusele" is far less than the length of any of these waves. It has been estimated that the diameter of the "electron" is 12,700,000,000th of an inch.

The length of the duration of a wave of red light is only the 430,000,000th of a second, and that of violet light 760,000,000th of a second.

By means of these exceedingly rapid movements, consciousness can perceive very slow and long vibrations. We can see a tree vibrate, a bridge swing, the tide rise. And although we cannot see the sun apparently move, yet we can see the result of the real motion of the earth and calculate the durations of the revolutions of the heavenly bodies. This is TIME sensation. (See Diagram No. 5.)

And if there are very short and very small vibrations, there are also very long and very slow vibrations of ether. There is no reason why there should not be such a slow vibration as not to be completed in less than one year, or a hundred years, or any length of time,—and so large as to occupy the diameter of the orbit of the earth, or any of the planets, or even that of any of the immense fiery suns which dot the heavens; because both TIME and SPACE are infinite.

There must be more than ONE kind of vibration before we can perceive it at all,—for it is by comparison that consciousness takes cognizance of anything.

In light and sound there are many closely similar vibrations. In the case of TIME there are (1) The motion of the earth turning on its axis; (2) The motion of the earth flying around the sun; (3) The movements of the planets about the sun; (4) The apparent revolution of the entire heavens daily; (5) The occasional appearance of comets, meteors, etc., in the heavens.

It is just as reasonable to conceive of very slow and long vibrations as to conceive of very rapid and short ones.

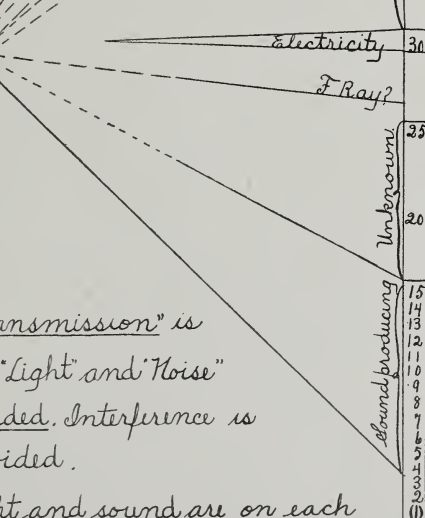
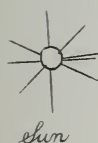
Our "Time Measure" can be used to calculate the duration of any motion;



## Diagram No. 5

Notice - (1) Primordial vibrations extend through all space.

- (2) Light which we obtain is mostly all from our sun.  
 (3) Sounds as well as the other special sense impulses are confined to our earth.  
 (4) "Organic" or "Animal" impulses are not shown they are restricted to the body.



2,305 843 009 213 693 952  
 1 102 921 504 606 846 976  
 576 000 000 000 000 000  
 288 230 360 151 711 744

1,125 896 906 842 624.  
 562 949 953 421 312  
 281 474 967 716 656

1.037 741 824.

33 000 000

32,768  
 16384  
 8192  
 4096  
 2048  
 1024  
 512  
 256  
 128  
 64  
 32  
 16  
 8  
 4

"Thought transmission" is better when "Light" and "Noise" are suspended. Interference is thus avoided.

Notice. Light and sound are on each side of the vast "Unknown" field. Electricity nearly equally divides the "Unknown" area into two parts.

Note. The twin the first column represents a pendulum making one swing in one second.



to estimate how many similar revolutions of the earth, or fractions thereof, it required for the forces of Nature to accomplish anything that has been accomplished; and, by extension of the scales, to estimate how long it will require the same forces to accomplish other and somewhat similar results.

From the constancy of the movements of the earth and other heavenly bodies in the past, calculations can be made accurately how long it will require for similar repetitions of the same. If the speed of the earth's movements varied, then our system of calculating time would be entirely wrong.

Zeno—Since it has been known so long, it is a wonder to me that we are not usually taught more concerning the true nature of time,—if I can be allowed to speak of it as a thing when we know that it really does not exist except as a sensation. And I would think that the “line” as in Fig. (A) in the diagram would be all that is needed as a time measure,—for it would be much more convenient to make divisions and periods on it than the “solid” measure would be.

Janus—As I said before, the object of having the “solid” measure is in order that we can erect another figure (a surface) at right angles to the “time line,” so that we can locate everything that exists in mathematical relation to time. This is a great convenience, and it is necessary, because everything that does exist, does so in time and space. The TIME is the “present” and the space is represented by the “wheel,” or the “present vertical” as referred to previously. There is nothing in all the universe which is not accommodated in the “present vertical”—all forms of matter and every mode of energy, all mind, spirit, Creator, or creative force, and all phases of mind, can be properly shown in their relation to time by means of these figures crossed at right angles. Memories are by this means separated from desires,—demonstrable scientific achievements, from hopes, beliefs, and faiths, and opinions. By means of this arrangement we can explain the modus operandi of hypnotism, ecstasy, dual mind, thought transference, mind reading, mind healing, trance, mediumship, objective mind, subjective mind, instinct, the composition of the mind itself, and understand how the phases of the mind are produced, Who it is or WHAT it is that corresponds with the Creative power of the universe; and, finally, place man in his proper relation to the rest of “evolving” creation.

Zeno—It appears to me that if such marvelous results can be attained by means of this simple hypothetical figure, that these crossed lines or figures must be the key to the universe of knowledge. I must say that I doubt that such results can be so easily obtained, but not being acquainted with the nature of these subjects very well, nor how you propose to proceed, I am not in a position to say it is impossible.

Janus—All truths in the universe agree with each other. Truth is like a diamond, whose value is greatly enhanced by careful polishing and proper setting, and there are new ones being discovered. The more you examine a

truth the clearer it will appear, and when we carefully examine and apply the ratio "ENERGY AND MATTER ARE TO TIME AS THE PERPENDICULAR IS TO THE HORIZONTAL," we will find that it is useful and convenient, and that it will serve to make plain many of the deep and mysterious sayings recorded in the writing of philosophers, sages, and prophets, and to explain many peculiar phenomena.

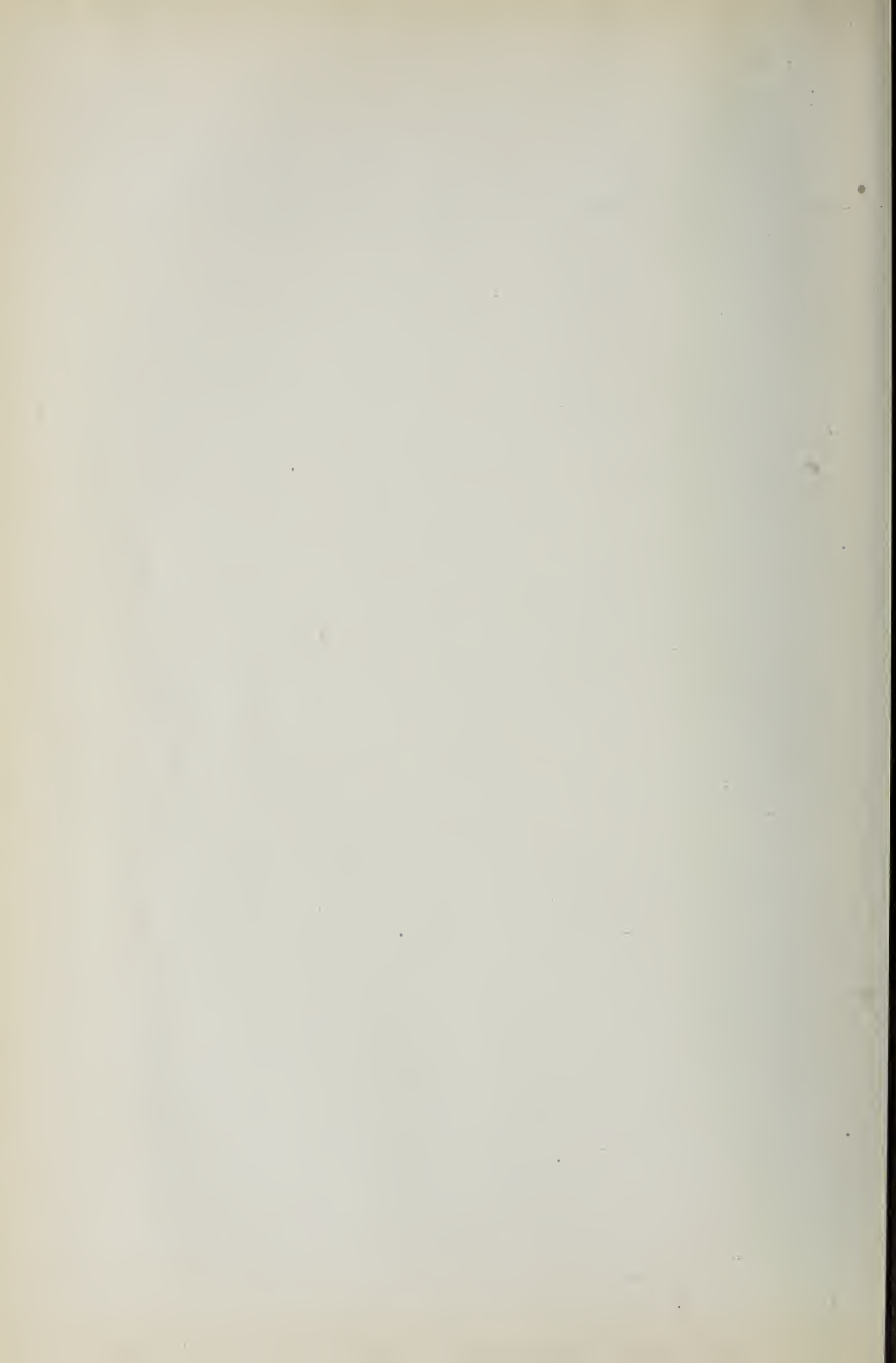
There are some general truths which stand behind others, as it were, and when the general truth is appreciated, then the subordinate truths appear as branches from it, like the branches and foliage of a tree. Any hypothesis is valuable in proportion to the number and importance of the facts which it will explain, and if it is simple and easily understood, it becomes more valuable, because it is not difficult to apply, and the detection of error is proportionally easier. If the hypothesis will explain all known facts, then it is as good as the natural law, because everything pertaining to its operation occurs as if it were the natural law. If any new facts be discovered, which the hypothesis will not explain, then it becomes discredited, and some other and more general law will be sought. Still it may be useful. Even Newton's law of Attraction of Gravitation is now disputed as being a true Natural law, partly because his law is confined to separate bodies, and implies empty space, which is now believed not to exist. The idea of continuity of matter throughout space implies that there is no empty space, or that there is some kind of matter everywhere, and that the ether, like a limpid jelly, really FILLS up all the intervals between appreciable bodies of matter.

But since Newton's hypothesis explains all the facts with reference to masses at different distances, it will continue to be used until some other hypothesis, perhaps the very opposite of attraction, is found that will explain all in conformity with CONTINUITY of matter.

Dalton's law of atomic weights is simply a recognition of the general fact that all elementary substances, which combine, do so in proportion to certain specific weights, or multiples thereof; such weight, for each substance, is called "its atomic weight," although no person ever isolated an atom, yet even if it were proved that the atom does not exist as such, still his law or hypothesis would be used until a better one was discovered that would account for the facts without the supposition of the existence of the atom, because it affords chemists a very great advantage.

Notice, in the horizontal "time line" there is no matter and no force, and accordingly there is no motion. These are all confined to the "vertical present," every part of which is in motion, and it is filled with matter and energy. Everything in the "big wheel" is alive with vibratory effort, continually placing the elements of matter and masses thereof in new relations to each other, and constantly changing the shape, composition and properties in some way, either by combining them in different ways, or decomposing them, and the only constant thing in nature is "change." New substances

appear, and old forms disappear as they are taken up in the new, yet the same general amount remains, both of matter and energy. The forces operate solely on matter, not on "time." In fact, TIME AS AN ENTITY DOES NOT EXIST. Hence, such expressions as "Father Time," "Time flies," "Time is on the wing," etc., are misleading, because they imply action, intelligence, and personality, all of which only exist in the "present vertical" portion of the hypothetical figure.





## CHAPTER 2

THE CAUSE OF LIFE. THE VERY RAPID MOTION OF THE EARTH AS IT REVOLVES IN ITS ORBIT, DRAGS THE ELEMENTS OF MATTER SWIFTLY AND IN A SLIGHTLY OBLIQUE DIRECTION, AGAINST THE DELICATE WAVES OF ETHER, THE UNIVERSAL, CONTINUOUS, AND VARIOUSLY GROUPED SERIES OF WAVES, SUPPLY THE FORCE NECESSARY TO CARRY ON THE PROCESSES OF LIFE. THE ELEMENTS OF MATTER FLYING SWIFTLY WITH THE EARTH, MEET THE WAVES OBLIQUELY, LIKE RAIN-DROPS STRIKE THE FACE WHEN ONE RUNS OUT IN THE RAIN, ALTHOUGH THEY ARE REALLY DESCENDING VERTICALLY.

Notes by Zeno—

Zeno—Since everything there is in all the universe is located in the “Big Wheel,” therefore the PRINCIPLE OF LIFE must be included with all the rest. I have understood that the principle of life was something like a spirit, or power, or non-material force, or influence which was instilled into animals and plants by the Creator, away back at the time of the creation, and that it is due to the principle of life that there is organization and evolution, and from living organized matter MIND is finally developed. I would like very much to understand how you make it appear that the life principle and mind also are contained in the “big wheel.”

Janus—“Principle,” used in the way you mention, must be either some thing, or some force, and since all kinds of energy and all forms of matter exist IN the present, therefore the principle of life is also IN the “big wheel.”

At one time “it was believed that there was a ‘principle’ called PHLOGISTON, or CALORIC contained in combustible substances, but, after Lavoisier discovered the chemical theory of combustion, phlogiston was disregarded; still, for a time, ‘caloric’ was considered the active ‘principle.’”

Count Rumford discovered that in boring brass cannon for  $2\frac{1}{2}$  hours that there was sufficient heat generated to raise  $26\frac{1}{2}$  pounds of water from the freezing to the boiling temperature, yet there was no loss of weight in the process; hence he concluded that the heat was set up in the particles by the forces applied, seeing that the process could be continued indefinitely.

Professor Joule, by a series of ingenious experiments, discovered the mechanical equivalent for heat. The ratio was, that to raise a pound of water one degree Centigrade was equivalent to the work required to raise one pound of weight to the height of 1392 feet, or 1392 pounds to the height of one foot.

When this was demonstrated there was nothing more heard about the “principle” as a cause for combustion.

Heat has been proven to be a “mode of motion,” and when once the real

cause for "LIFE" is discovered and demonstrated, it will also be found to be "a mode of motion," and the idea that some principle is the active cause will be discarded entirely, for it will be shown to be due to a force which acts upon matter.

Living beings can and do manifest varying degrees of force or power, but the force which they manifest cannot be the force which causes life, because each being must be living before it could exhibit its power.

Boulton and Watt, of London, established the "mechanical equivalent" for one horse power, by testing dray horses, working 8 hours per day in the docks. This "equivalent" is recognized as 33,000 pounds, or the force necessary to raise 33,000 pounds one foot in one minute acting directly against the force of gravity. Ever since their time this "equivalent" has been used in making calculations and estimates in mechanics.

Life force, or the power which produced life in the horse, evidently existed before such a test of strength could be made, and was operating as truly in the horse when he was not working as when he was. The power which different beings exert, varies very greatly. If an elephant could exert as much power in proportion to its weight as a flea can, he could jump across the Atlantic ocean in 13 jumps, and run across the continent carrying a cannon of 60 tons in an hour.

At one time the power of an animal is much greater than at another time; hence any mechanical equivalent accepted is only a matter of convenience for making calculations.

Life is responsible for birth, growth, development, the phenomena of metabolism, reproduction, etc., and its action is upon the elements which combine to form the cells and tissues, inducing them to organize, and manifest the functions peculiar to each organ, and that also of the entire being, which latter differs widely from that of the separate organs composing the being.

It is such that it acts both chemically and "physiologically"—it constructs MOLECULES out of atoms, and atoms from electrons; it arranges the MOLECULES into "cells," fabricates the cells into organs, and arranges the organs into their most effective positions in each creature, where they can perform their respective functions.

One might conceive of the action of life force as that of a tree ("the tree of LIFE"), whose arborescent evolution progresses always with variation in which each variation, however small, constantly depends upon preceding developments and present conditions.

Life has been compared to a flame, as of a candle; sometimes strong and vigorous, at other times weak and flickering, never constant; it commences like a very minute spark, it grows, develops, declines, and dies away, and cannot be found any more; it is circumscribed, and during all the while it lasts, chemical products result from its action different from the elements which unite in its production. The flame you see this moment is not the flame

you see the next, although it appears like it. So with life, the identity of the individual remains, but it is not the same structure, because there is a continual stream of new substances entering into all living tissue, and becoming appropriated by the cells, whilst former elements thereof as continuously pass away and disappear.

So that the living being is like unto a river, which remains a river as the water rushes along, but it is never the same water which composes it. At times life becomes embarrassed by the accumulation of effete material, so does the flame, and in our attempt to remove the dross we may snuff it out.

The force which produces life must be one which acts upon matter in all regions of the earth, in the deep ocean, for miles up in the air, night and day, winter and summer,—life has been abundantly discovered in strong alkaline deposits, and in petroleum pumped from beneath several strata of the crust of the earth. It accompanies the earth as it flies through the abysses of space, as it plunges forward and round nearly 1,000,000,000 miles in each year, and this has continued for several millions of years. It manifests a tendency to evolve matter which it has organized, from the simpler forms to more complex and complicated structures. It acts as certainly in extremely minute organisms, some of which are less than  $1/200,000$  of an inch, as in the elephant.

To say that life is due to a “principle” is but an acknowledgment that its real cause has not been discovered and demonstrated.

It is certain that the force which causes life must either be inherent in the elements of matter, or else it is a force which is impressed upon these elements from the outside.

Zeno—In either case it would seem to be possessed of some wonderful kind of intelligence, in order that the elements of matter can become arranged into such extremely varying relations to each other as enables them, and the different organs which are formed, to classify into completed structures still performing their respective functions. I don't think it can be in the elements of matter, else they would require to possess infinitely more intelligence than we do,—but that is absurd. And if it is impressed upon the elements by an outside force I would think that it must be some kind of spirit, or mind, of perpetual and infinite presence, directing evolution for some ulterior purpose which never can be completed, owing to the constant changes necessary to the relation of matter with force. It is to me a great mystery.

Janus—Matter has a property called INERTIA, which is such that it has neither the power to move itself nor to arrest its own motion when moved. Molecules and electrons are “matter” as certainly as large masses—hence the force which causes the motion amongst the elements of “living matter” must be a force applied from the OUTSIDE of it,—and it must be the same “life force” which animates an amoeba as that which animates any large creature,—and such that acts upon the “chemical element” in molecules as that which acts upon “physiological elements” (cells, which are made up of molecules).



Hence, also, the total amount of "life force" acting upon a large creature must be proportionately greater than the amount acting upon a small creature.

Where can we find a force which constantly acts in all regions of the earth, in all climes and at all times, which acts upon both small and great creatures, and at the same time pushes forward the changes constantly, which occur within the very molecules of which we know the cells and tissues of living beings are made?

Zeno—Since it is not a "principle" it must be "spirit" or "mind."

Janus—The earth revolves on its axis once daily; swings once annually around the sun, and flies forward in space 400,000,000 miles yearly, in company with the sun and seven other planets, 26 moons, 700 satellites, some comets, and encounters untold numbers of meteors, which are attracted towards it; during all of the flight of the earth it is spinning through the ether, which is alive with vibrations which convey immense quantities of energy, which it apparently receives from the hundred millions of blazing fierce suns, or stars which are scattered throughout the vast expanse of the heavens. The amount of energy contained in the ether is altogether inestimable, for it is calculated that our little sun sheds upon the earth continually four and a half million horse power of radiant energy for each square mile of surface. Viewed from the sun, our earth would appear as a small circle only  $1/2,000,000,000$  of the area in the heavens at the distance of the earth from the sun. The total amount of the sun's energy is estimated at 495 followed by 26 ciphers—49,500,000,000,000,000,000,000,000 horse power. What must be the horse power of radiant energy emitted from any one of the much mightier suns than ours? It is estimated that there are at least 100,000,000 mighty suns, all of which circle rapidly in their separate orbits, and each of them is surrounded with immense envelopes blazing metallic vapors. The ether receives and conveys this energy in every direction, and the earth with its elements continues to roll and circle through the ether, at the rate of  $31\frac{1}{2}$  miles per second. This great speed is only about one hundredth part as rapid as the speed of light, and there are waves of ether much faster and much slower than those which produce the phenomena of light.

Ether is so extremely limpid and penetrating that its vibrations readily pass through and amidst the atoms and electrons within the molecules of matter, and therefore must communicate its energy to them.

If we can show that the force encountered by the elements on the earth acts in the manner required to produce the motions and forms associated with life, and as there is no other source which we know of sufficient to perform the task, it should be accepted as a sufficient explanation of the phenomena produced,—or that from this source comes the "life force."

But before explaining how the results, or life itself, could occur from this cause, as they are known to occur, it may be profitable to relate a very few

of the thousands of experiments which have been made to find out if life can be made to appear independent of previous life.

Zeno—But finding out whether life comes from former life would not prove where the progenitors obtained it.

Janus—No; but it would show if life is necessarily hereditary.

A large variety of unsuccessful attempts have been made to account for the phenomena of life. There are, in ancient philosophies, the “elemental theories,” and “hypothesis concerning a principle of life” in the universe itself—*Anima Mundi*—manifesting itself in all the varieties appearing in the world. These theories were purely hypothetical—attempts to escape the difficulty rather than to solve it.

According to Descartes and others, the phenomena of living bodies may be explained by the mechanical and chemical forces belonging to matter. This, at least, approximates toward a scientific treatment of the facts, as it bears upon the activities of ORGANISM, which are to be explained by these FORCES named (mechanical and chemical).

The age of science, relying upon observation and induction, with the use of scientific instruments, has raised the question of the origin of life, with a view of ascertaining whether we have any scientific evidence of spontaneous generation.

The conclusion is mostly adverse to this alternative, and it is generally agreed that there is no life known to exist which does not develop from GERM, under the action of external conditions favorable to the unfolding of life already present, and which was found to be of a different type, according to the laws of heredity.

This investigation naturally centered upon the lowest forms of organism, under such scrutiny as becomes possible with the aid of the microscope.

Zeno—But even if they did discover spontaneous generation, I do not see how that would discover the FORCE which produced life in the first place, nor what the force is which keeps it up; for it might still reside IN the substances used in the experiments,—or it might still be due to a principle,—or to a spirit or outside influence, such as you spoke of in the ether, for the ether can pass through any kind of a vessel as easily as light through glass, I understand.

Janus—I will give you a short account of two or three experiments which have been made by very reliable men, and what results they obtained, and afterwards I will quote you the opinion given by Professor Chafer upon the subject, and afterwards attempt to explain the effect produced upon the elements of matter by being drawn very swiftly through the vibrations of ether,—the force being derived from the three motions of the earth.

However, let us proceed with the reports of some experiments made by bringing together in a sterilized condition and with proper protection in closed glass vessels, in order to see if the substances would come to life, independent of previous living beings.

Professor La Due, of France, is perhaps the foremost in the field of experimenters. He thus created not merely single elementary forms of life, but also beings having the appearance of corals, mussels, star-fish, and other comparatively advanced creatures. He made both animal and vegetable forms, and placed them in a nutritive medium. For instance, he made a germ, consisting of one part of sugar, two parts of sulphate of copper; the latter forming a covering membrane. This he placed in a solution of gelatine, yellow blood alkali, chloro-natrium, and silica salts. The latter salts were put in to furnish bones and shells, which in sea creatures are found to consist largely of silicates.

The germ burst its membrane, greedily swallowed up the nutriment in the surrounding fluid, developed a head and body, threw out tentacles, and by some mysterious chance one of these grew enormously beyond the others, until it seemed like a great snake.

Different combinations of the same substances produced other copies of living creatures.

When blood was omitted from the nutritive medium, vegetable forms were obtained.

These creatures did not have the power to reproduce others, hence it was said they were not strictly alive.

Professor Burke of Cambridge University (England) reports that he has produced living from non-living matter with the aid of the wonderful substance, radium.

He placed the radium in a test tube containing sterilized bouillon, and got from the mixture microscopic growths resembling, at first sight, what is seen when bacteria are cultivated in test tubes of bouillon; but under the microscope these creatures were found to be different from any known micro-organism. They moved constantly in a right-hand direction, and hastened their movements under the influence of light.

All possibility of the invasion of living germs had been eliminated, yet these minute rounded bodies seemed to be very much alive. They combined the characteristics of living protoplasm, at least so far as they subdivided, grew and multiplied. In this way they differed from Professor La Due's creations, which never showed any capacity to reproduce themselves.

To these cultures Professor Burke gave the name of Radiobes. They had nuclei characteristic of unmistakable living matter, and which differentiate it from crystals.

Prof. Charles Powell White of Manchester University, in his experiments, found that crystals had the power of growth, movement, and reproduction; a combination of faculties formerly believed to belong only to living matter. He found that a crystal of sodium chloride increased by forming new molecules from a nutritive medium, in much the same way that a fish would sustain itself. The crystals multiplied by fission in the same way that the



lower forms of life do. When there was not sufficient nutrient material in the surrounding medium, the crystals showed the power of moving away in search of more food. While the crystals do not possess nuclei, which are characteristic of the higher forms of life, they nevertheless have certain powers which are identical with those of living creatures, and may be regarded as the beginning of life.

Professor Chafer, President of the British Association for the Advance of Science, one of the foremost scientists in the world, thinks CREATION is continuous. He said:

“If spontaneous generation is possible, we cannot expect it to take the form of living beings with so marked a degree of differentiation, both structural and functional, as the organisms which are described as making their appearance in these experimental flasks. If the formation of life of living substance is possible at the present day (and for my own part I see no reason to doubt it), a boiled infusion of organic matter, and still less inorganic matter, is the last place in which to look for it.

“Our mistrust of such evidence as has yet been brought forward, need not preclude us from admitting the possibility of the formation of living from non-living substance.

“Setting aside as devoid of scientific foundation, the idea of immediate supernatural intervention, in the first production of life, we are not only justified in believing, but compelled to believe, that living matter must owe its origin to causes similar in character to those which have been instrumental in producing all other forms of matter in the universe,—in other words, to a process of evolution.

“Looking, therefore, at the evolution of living matter by the light which is shed upon it from the study of evolution of matter in general, we are led to regard it as having been produced, not by sudden alteration, whether exerted by natural or supernatural agencies, but by a gradual process of change from a material which was lifeless, through material on the border land between animate and inanimate, to a material which has all the characteristics to which we attach the term life. So far from expecting a sudden leap from the inorganic or at least unorganized, into an organic or organized condition, from an entirely inanimate substance to a completely animate state of being, should we not rather expect a gradual procession of changes from inorganic to organic matter through stages of gradually increasing complexity until material which can be termed ‘living material’ can be attained? And in place of looking for the production of fully formed living organisms, in hermetically sealed flasks, should we not rather search Nature herself, under natural conditions, for evidence of the existence, either in the past or in the present, of transitional forms between living and non-living matter?

“The difficulty, nay, the impossibility, of obtaining evidence of such evolu-

tion from the past history of the globe, is obvious. Both the hypothetical transitional material, and the living material, which was originally evolved from, may, as McCallum has suggested, have taken the form of different ultramicroscopic particles of living substances, and even if they were not diffused, but aggregated into masses, these masses could have been physically nothing more than colloidal watery slime, which would leave no impress upon geological formation. Myriads of years may have elapsed before some sort of skeleton, or silicious spicule began to evolve itself, and thus enable life which must have possessed a prolonged existence, to make any sort of geological record.

"It follows that in attempting to pursue the evolution of living matter to its beginning in terrestrial history, we can only expect to be confronted by a blank wall of nescience.

"But are we justified in assuming that at one period only, and by a fortunate or fortuitous combination of circumstances, living matter became organized out of non-living matter, and life became established?

"Is there any reason to conclude that at some previous period, our earth was more favorably circumstanced for the production of life than it is now?"

He answers: "I have vainly sought for such reason, and if none be forthcoming the conclusion forces itself upon me that the evolution of non-living into living substance has happened more than once, and we can by no means be sure that it is not happening still.

"It is true that up to the present time there is no evidence of such happening; no process of transition has hitherto been observed. But on the other hand, is it not equally true that the kind of evidence which would be of any real service in determining this question has not hitherto been looked for? We may be certain that if life is being produced from non-living substance it will be life of a far simpler character than that which has yet been observed—in material which we will be uncertain whether to call it animate or inanimate, even if we are able to detect it at all, and which we may not be able to visualize physically even after we have become convinced of its existence. But we may look with the mind's eye, and follow in imagination the formation which non-living matter may have undergone, and may still be undergoing to produce living substance.

"No principle of evolution is better founded than that insisted on by Sir Charles Lyell, justly termed by Huxley 'the greatest geologist of his time'—that we must interpret the past history of our globe by the present. That we must seek for the explanation of what has happened by what is happening; that, given similar circumstances, what has occurred at one time will probably occur at another. The process of evolution is universal, the inorganic materials of the globe are continually undergoing transition. New chemical combinations are constantly being formed, and old ones broken up; new elements are making their appearance, and old ones disappearing. Well

may we ask ourselves why the production of living alone should be subject to other laws, that those which have produced, and are producing the various forms of non-living matter, why what has happened may not happen.

"If living matter has been evolved from lifeless in the past, we are justified in accepting the conclusion that its evolution is possible in the present and in the future. Indeed, we are not only justified in accepting this conclusion, but we are forced to accept it. When and where such change from non-living to living matter may first have occurred, when and where it may still be occurring, are problems as unsettled as they are interesting; but we have no right to assume that they are insoluble."

Zeno—Professor Chafer does not appear to have much confidence in the conclusiveness of the evidence furnished him by the reports of these experiments,—nor does he believe in a miraculous creation, such as we read about in Genesis. Chafer must differ with Carpenter, the physiologist, Dalton, the physicist, and Hunter, the anatomist, who said that "organization" comes after LIFE, or that life exists before organization; for there must be plenty of organization in the creatures produced in the experiments, yet Chafer does not believe they were alive really.

Janus—The forces which produce LIFE must exist, in some other mode, before inanimate could be animated, and certainly before there could be any "organization"—because there cannot be organization before there is the living thing in existence to become organized. Organization is a process by which living elements become placed together in certain relations to each other, according to some design or plan.

There is "organization" even in molecules, because there are many substances which have identically the same number and kind of atoms in them, but with very different properties. For instance, the poison of a rattlesnake has the same chemical composition as the white of an egg. A diamond is the same as lampblack, so far as the molecule of carbon is concerned, each being pure carbon. Coal gas and oil of roses have each 4 atoms of carbon and 4 of hydrogen. Oil of orange, lemon, ginger, and black pepper in every instance have 6 atoms of hydrogen and 10 of carbon, yet they have very different qualities. Strychnine and theine have each the same number of atoms, and of the same kind and proportion, yet with very different properties.

These examples serve to show us that the organization of the molecules differ in the arrangement of the atoms in them, and that the difference is the cause of the variation in the properties of the different substances.

An atom can no more choose its position in the molecule than any form of matter can move itself. In other words, "force" must be applied to matter before it moves into any position.

The water of a river or of the ocean may be agitated with many minute impulses whilst at the same time it flows en masse. So, also, the extremely limpid ocean of ether throughout space may be in a continual vibratory state



whilst great waves of it shift more slowly, yet all move simultaneously in rhythmical, arithmetical, and geometrically related undulations. The many millions of fierce blazing suns revolving at intervals in the heavens impress the ether with large circular waves just as certainly as the swiftly moving hydrogen atoms in the metallic vapors around them do with small waves.

All of these undulations are made upon and conveyed by the ether, and in some way affect the earth and its elements, perhaps moulding their shape and influencing their movements. In fact, MAN, himself, was by the ancients regarded as a MICROCOSMOS, or universe in miniature, an abstract or model of the whole, being composed of matter and spirit. It might be that the entire solar system moves in the wake of some of these immense circular waves, as it flies forward in space,—or that the earth follows a smaller model; but of this we are certain, that the earth with its elements continues to sweep through, amidst, under, and over the vibrations of ether on every side of the planet; that we continue to encounter the forces contained in the ether; that on every side of us LIFE springs up,—we know that FORCE is never annihilated, although it does become transformed into FORCES, WHICH ACT IN A DIFFERENT MANNER FROM THE ORIGINAL FORCE,—and that matter acts as an INSTRUMENT to transform the one kind of force into the other. In other words, we have the force, and the result of the transformation, under the influence of MATTER with which the force comes in contact.

Now let us see what would be the natural way in which the marvelous change in the nature of the FORCE could be accomplished.

If you run out in the rain, when the drops are falling vertically, you fancy that the rain is coming in your face; and the faster you run, the more obliquely you fancy the drops meet you. If you draw a body through the water, or through the air, you will observe that one side of the body, which is dragged, through the medium receives more pressure than the other side; and if the drawn body be porous, that some of the fluid or gas passes right through the body and escapes out from the less compressed side. And if the body which is moved be kept continually revolving as it moves, then the exposed side, and the shaded side, keep continually changing as the body revolves, yet the same amount of pressure and relaxation would be maintained the same as long as the same speed is maintained and the same medium is used.

The speed of the earth is only about 1/100dth part of that of LIGHT vibrations (or perhaps “electrons” shot out from the sun),—so that as the earth flies forward its elements meet such vibrations at an acute angle, or one about  $3\frac{1}{2}$  degrees, if they were at right angles to the orbit of the earth; or that would be the resultant of the sum of all if the agitation or vibration affected the ether as a mass.

A very small body drawn through ETHER, is affected exactly in the same way as a larger body drawn through the air, or through a liquid; because

the ether is as much more limpid in proportion to the gas or liquid as the "electron," for instance, is smaller than a football. A MOLECULE is a UNIVERSE when compared to an "electron." A LIVING cell is a UNIVERSE when compared to a "molecule." A man is a UNIVERSE when compared to a "cell,"—just as truly as THE UNIVERSE is in comparison with the "solar molecule" (solar system).

The ether is such a medium that it is CONTINUOUS, and its rays become FOCUSED or else DISPERSED as they pass through matter, depending on the shape, size, and nature of the body through which they pass. There are, also, interstices between molecules as well as between cells and fibers, and pressure favors the entrance of substances whose elements are minute enough to enter the interstices. Substances held in solution in liquids which will penetrate any body are carried with the liquid.

Pressure favors absorbtion, relaxation favors elimination. For example, take a living cell, surrounded by serum, which holds a percentage of material in solution adaptable to the construction of the living cell. Accordingly as the cell surrounded by the nutrient material flies swiftly forward through the forceful vibrations of ether, the serum becomes forced into the cell, and the contents of the cell find escape upon the relaxed side of the cell. So that a stream of the serum continues to enter and to leave the cell; but as the serum and its contents swim through, the MOLECULES of the cell conflict with the MOLECULES of the serum, and METABOLIC processes are set up between them, in which there is an interchange of certain elements of the former for some of the elements of the latter. The BUILDING UP process is called ANABOLIC, and the PULLING DOWN processes are called KATABOLIC. If the fabric of the cell be expansile, it retains some of the serum and contents, and GROWTH of the cell results. When the processes of "absorbtion" and "elimination" remain about equal, the cell remains about the same size. If there is "deposit," or failure of elimination takes place, the cell becomes inelastic or stiffer, and, being laden with débris, it is incapable of effecting its normal metabolic interchange of elements—hence its function is altered, and its products indirectly pervert the action of other cells which are all more or less dependent on each other,—an inferior grade of vitality ensues,—old age of the cells sets in,—the "physiological molecules," which contain several hundred "atoms" each, tend to dissolution, or to fall to pieces, and the "pieces" are "chemical molecules" which originally combined to form the "physiological molecules."

What is true of one cell is true of all, only that the different stages of the life processes are performed with somewhat different elements, in each kind of tissue, and are slower in some than in others.

You will easily understand that every side of any cell in a plant, for instance, which remains fixed in one position with reference to the earth, is nevertheless exposed to the "pressure" of the ether vibrations, simply because



the earth keeps turning as it progresses very rapidly. But in the case of an animal, which can move about in many ways, the cells and tissues are accordingly turned many times in the day, but forever does the "pressure" persist upon one side, and the opposite side of the cell is continually "relaxed" and capable of eliminating the contents of the cell, whilst the "pressure" side ABSORBS some of the serum and its load of nutriment.

This, I hold, is one valuable source of advantage received from exercise, as the "pressure" side and the relaxed side are more rapidly changed for the time, stimulating the cells to greater activity.

The great cause for death of a cell (and of the entire being) is due to the fact that it becomes poisoned with its own products, which, after they are formed, require a certain time to escape, and in the meantime pervert and injure the life forces at work in the cell.

Zeno—Do the different sized vibrations of the ether correspond in magnitude to the size of the atoms of the different chemical elements?

Janus—Every one of the elements is definitely related to every other one progressively up from "hydrogen," which is the lightest, and for that reason it is taken as the "unit," whose "atomic weight" is ONE. But the UNIT, hydrogen, is not exactly corresponding to our digit ONE,—in other words, it is a small decimal different. This is because even hydrogen is made up of 1800 different "electrons," and as all elements can be reduced to electrons (or corpuscles) it is evident that even if there were only one electron more or less than the number that made up our UNIT in weight ONE, there would accordingly be room for a slight discrepancy in the totals. Therefore if oxygen has 8 times the atomic weight of hydrogen, an atom of oxygen would have exactly 8 times as many "electrons" (these are sometimes called Primordial atoms)—if carbon has an atomic weight of 14, the atom of carbon would contain 14 times as many electrons as an atom of hydrogen, and so on for the entire 88 elements which are known; but if there were 1801 electrons in place of 1800, there would be a very small error in the "unit."

The sum of the forces acting upon the electrons in an atom of hydrogen would accordingly be the GROUP of forces acting upon the atom of hydrogen. Multiples of the same would correspond to each of the elements. The sum of the forces acting upon the atoms in a molecule would be the GROUP of forces acting upon the molecule. The sum of the forces acting upon the molecules in a CELL would be the GROUP of forces acting upon the cell.

There are necessarily GROUPS of vibrations of ether, which are multiples of the single sets of smaller groups; in fact, they must all be related to each other mathematically, and geometrically,—and you will remember that when you examine the spectrum of light, that there are Fraunhofer lines, showing that there are divisions existing among the groups of rays, and these divisions are produced by "interference" of the white carbon rays from the sun,

owing to the presence of certain elements existing in the gases of the envelope of the sun.

Chemical elements are also arranged into GROUPS and into SERIES,—these groups are made because of the increasing atomic weights of the elements and the series are arranged because of the properties of successive groups of elements,—showing that they are all related to each other, and the relation existing amongst the elements depends directly upon the number of ELECTRONS contained IN the respective ELEMENTS.

Thus the earth twirling rapidly through the more or less stationary ether, which carries immense quantities of energy or force in its countless billions of vibrations, supplies the FORCES necessary to act upon and group all the elements of matter, and cause them to act and interact upon each other, “chemically,” and “physiologically,” so as to produce the phenomena of life, why should we attribute LIFE to a “principle” or to a “spirit,” or other “influence” about which we know nothing, and at the same time dispense with the self-evident FORCE which we know exists everywhere?

Zeno—Then you think that the creatures, derived from the experiments of Professor La Duc, and Professor White, and Professor Burke and others, were really alive but badly organized because they grew too quickly, or before the action of the reversed currents of ether, caused by the revolving of the earth, could have time to arrange the molecules properly?

Janus—Undoubtedly, and if the experimenters would construct an apparatus which would revolve, like the earth does, but more rapidly, and thus bring the different sides of the forming beings under the pressure of the etheric forces, there is no doubt in my mind but that in every case there would be what you might call spontaneous production of life; but, of course, the “spontaneity” would constantly depend upon the presence of MATTER and the action of the ether FORCES.

The phenomena of life, such as GROWTH, ABSORPTION, METABOLISM, ELIMINATION OR EXCRETION, ATROPHY, AGE, RESILIENCY, AND DEATH, can all be readily accounted for, and even reproduction of new cells explained by the action of ether vibrations upon the elements of matter, and as the earth continues to revolve and fly, and progress, for all time, subjecting the elements to the same processes, the opinion of Professor Chafer as to the continuous creation will be abundantly verified.

The OBLIQUENESS of the contact of electrons, free atoms, and molecules, with the ether vibrations, as the earth pulls the elements through it, necessarily has a strong tendency to cause the electrons, etc., to revolve rapidly, seeing that the pressure is applied more to one side of the free body than to other sides,—by this means one can appreciate why the electrons, etc., revolve. Planets, moons, satellites, and even suns, continue to revolve as they pursue their individual orbits.

*Molecules* of a solid cohere with each other,—those of liquids are nearly

balanced,—but those of gases have escaped from the range of influence of other molecules, and therefore tend to fly apart, under the direct influence of the etheric vibration pressure.

LIFE can only be recognized by its phenomena, and LIFE phenomena undoubtedly exist on much lower forms of life than we have any means of observing, or in any way recognizing. It is only when the living elements have become organized, and capable of growth, multiplication, division, mobility, assimilation, and so on, that we are able to recognize the LIVING BEING. But the transition from NON-LIVING to LIVING is graded so gradually that there is no distinct line between these conditions of matter.

Zeno—Would not the fine ether vibrations not have a tendency to separate the elements, rather than to bring them together?

Janus—When ether rays pass through any kind of matter they change in their direction, and some are arrested within the matter itself. The shape, size, and kind of substance upon which the rays act, is the index of the position of the focus formed, or the amount of diffraction, and the amount of absorption of the rays.

Anything which interferes with the concentration and diffraction thus produced, also interferes with the integrity of the substance and the degree and kind of organization which follows the action. If, for instance, débris becomes deposited within a cell, the “foreign elements” also interfere with the action of the cell itself, because the foreign substance “short circuits” the vibrations, and as a result the rhythm of concordant groups of vibrations which act upon the cell as a unit (physiological) is interrupted, and the integrity of the cell is lessened, and it tends to fall to pieces, and the pieces are more stable chemical molecules, or else less highly organized physiological molecules, and DEATH of the original highly organized living molecules of the cell occurs. These lower or simpler molecules are more stable, and the ultimate chemical elements are generally more stable than any “living” molecule.

DEATH is therefore the interruption of the rhythm or concord of the waves of ether.

Pythagoras said “God works by geometry.” The rhythmical concordance existing between the millions of waves of ether, although differing in speed and amplitude from infinity to infinity, form groups and series which also concord with each other, sufficiently varied to accommodate any and all forms of matter; which in turn has the power of focussing and of diffracting the groups and series of rays affecting it. The known existence and nature of PRIMORDIAL ATOMS,—the constant “atomic weights” of elements which are capable of being arranged into groups and series in proportion to their “atomic weights,”—the perpetual movements of the earth, subjecting the electrons and elements, as well as molecules, to the force contained in the



ether waves,—all indicate the nature and accuracy of the “instruments” with which God works in His geometrical system.

There is no other set of “instruments” known, or necessary, to obtain the geometrically accurate, rhythmical, universal, perpetual processes, observed in the evolution of matter and life, than is supplied by the forces inherent in the ether vibrations and waves, as they meet the earth and its elements, which constantly revolve and fly through them.

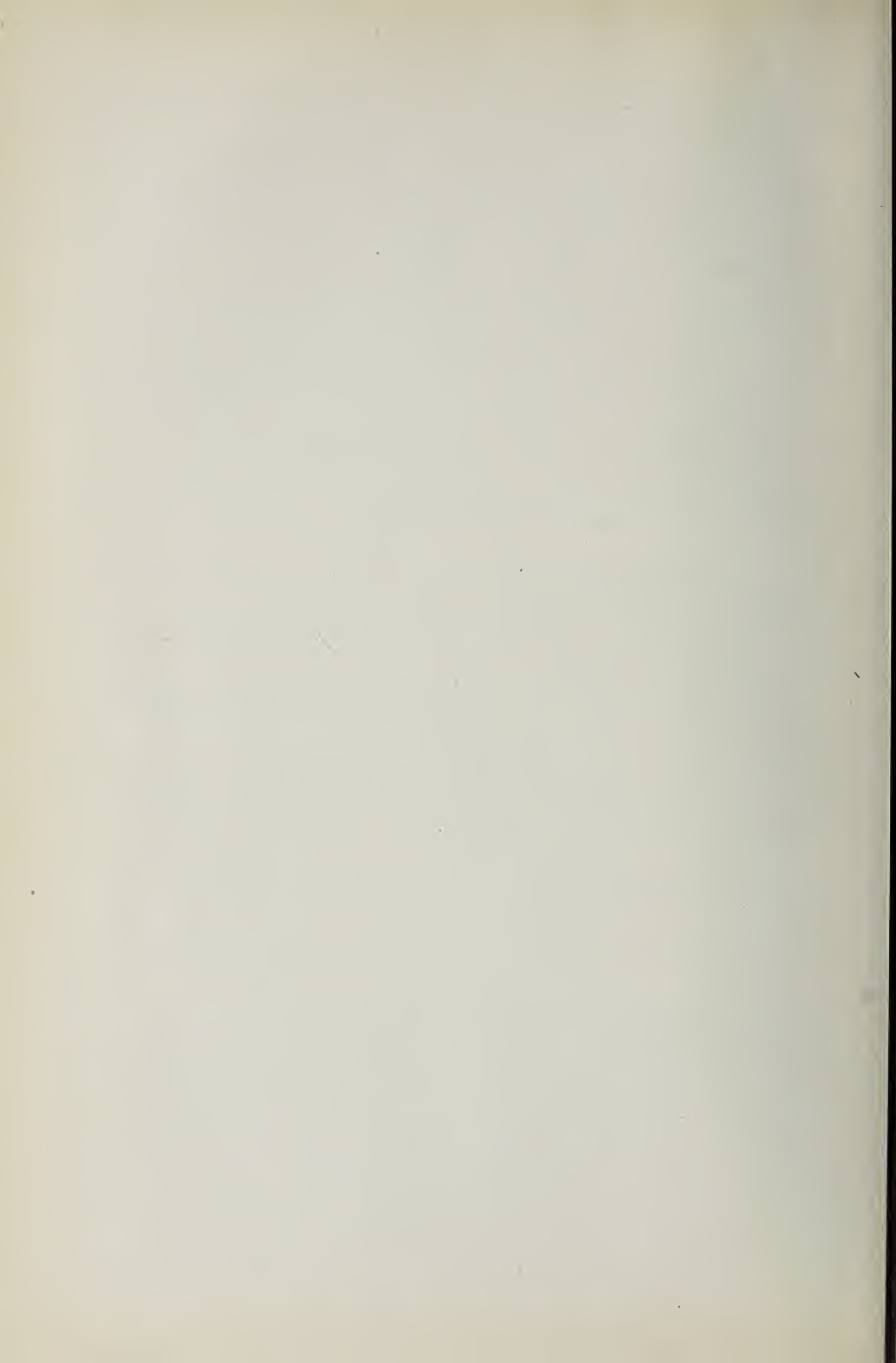
The process of evolution may be slow or rapid, not because of the absence of the forces which produce life, but from the necessity of “antecedent conditions.” There are no skips or breaks in the process of evolution and organization of living structures. One form of living matter can only appear as a consequence of preceding forms of matter. The mode of life is the design of the organization, which, like the roots, trunk, branches, foliage, flower, and fruit, all depend directly upon one another, and are related in structure and function. As plants differ in their form, nature, flower, and fruit, so also do the modes of life in animals: hence the simile, “The tree of life.”

Within a certain latitude each being yields to its environments, and from this “pliability” in the construction springs the evolution.

Degeneration is just as natural as the reverse, when the environments interfere with the “evolution.”

If we say that EVOLUTION is due to “natural selection,” we admit that there is some kind of INTELLIGENCE which does the selecting; which must exist either in the MATTER or in the FORCE.

ORGANIZATION is a slower process than the formation of molecules, because “cells” are millions of times heavier and more unwieldy than molecules—yet it is attained by the same “life forces.”





## CHAPTER 3

### THE INSTRUMENT

Notes by Zeno—

“Time is a measure,”—“ether is a mathematical instrument,”—“man’s body and brain are the instruments of his mind.” It appears everything is some kind of an instrument.

Janus—There is always a relation between “cause and effect,” and there is always some kind of an instrument used in the transfer between the cause and the effect.

Time is a *hypothetical measure*, used as an artificial convenience or system, to record the succession of events and activities; but, you remember, that the “time line” has really nothing in it, and that TIME is a “mental impression.”

It is different when we begin to calculate the real entities in the “vertical present,” or the “big wheel,” where, you will remember, we located all forms of matter and every variety of force. In this region we find “results” of forces acting upon different forms of matter; in fact, there is no way to know what a force is or its nature, except by the effects produced on matter. No one knows where “force” originated, but we can learn how to transform one kind of energy into another, and what kind of an instrument is most suitable to accomplish a certain result.

Force or energy is always transferred by the medium of some form of matter,—hence ETHER is some kind of matter, even although it may be a billion times as light as the lightest known gas. It receives impulses and transfers great quantities of force in the form of waves, or vibrations,—and in order to vibrate it is necessary that it has “material” in it which can be vibrated.

Many persons believe that the mental qualities manifested by man originate in the man. Others believe that there is a great “mind” outside of and apparently quite independent of matter, and from which great MIND all the peculiar and wonderful qualities of our minds originate. This latter very great class of people are prone to overlook the immediate influence of the “instrument,” or “machine”—the body of the individual—which acts upon the forces that come to it or else originate IN the body itself, and to overlook the qualities INHERENT in the ether itself, or the energies transmitted by it.

There is not much wonder in this, because our senses very often deceive us as to the real nature of phenomena; in fact, they generally do so, and until we learn the real nature of the effect of the “instrument” upon the forces which act upon it, we are liable to accept the untutored evidence of our senses.

For instance, we think we see with our eyes, but our eyes are only the particular kind of instruments which are qualified to modify the arrangement and disposition of certain vibrations of ether, and as the excitation of the ether vibrations is conducted and distributed into certain regions of the brain, the latter "instrument" exposes and assembles them in such a manner that we become conscious of the "colors" of external objects. The word WE, used here, refers to individual consciousness.

The "light" or color is not out in the field, nor in the sun, because "vibrations" are not light or color,—and not until the "instruments" have had their effect upon the vibrations is there either light or color. Therefore, at the brain, and IN the mind, is the very first place in which there is any "light" at all.

If there is any defect in any part of the "instruments," there is a corresponding defect or even absence of the phenomena of light.

If no person ever possessed the "instruments" for classifying the vibrations, there would be no such a thing as light or color, although there would be exactly the same number and kind of vibrations as there are at present,—yet the "instruments" do not produce the light; their function is to classify and arrange the vibrations for the use of the next "instrument," which is the brain: but it is the MIND which "sees."

A similar series of processes occur in collecting, disposing, and distributing vibrations of an entirely different kind which come to the MIND by means of the ear "instrument" with its nervous system to produce "sound." It is the MIND which hears the vibrations of the piano wires or any other sound producing vibrations. It is only after the waves of the atmosphere have been collected, arranged, and distributed in the brain centers of hearing in such a manner that "consciousness" recognizes "sound." If no one ever possessed the "instruments" there would be no such a thing as SOUND. Vibrations are not "sound," nor does the ear produce the sound.

Nor is there any "odor" or any "taste" in anything,—for it is only IN the MIND where these sensations occur.

Similarly, the "feel" of anything takes places IN the mind only. When a person has a leg amputated, the patient sometimes fancies he has a pain in the calf, or in the toe, of the amputated limb. This is also a deception of the senses.

Identically the same thing occurs with reference to the heavenly bodies. We think we see the sun rising in the east, passing across the heavens, and setting in the west; but we do not. When the real cause of the phenomena was discovered, the whole world laughed at the men who published their discoveries. Galileo was severely persecuted, and compelled to publicly deny what he had found out, and to sign a very humiliating apology for his sinful wickedness (?) in making known such impossible and foolish (?) things. If he had not done so he would have been killed.

With such evidence of the deception of our senses before us, is it any wonder that we are also deceived as to the nature of TIME? For it, also, is a mental impression, derived from the motion of the heavenly bodies.

Zeno—It is strange how the MIND can be deceived and afterwards learn the true nature of things. One would think that the mind should be able to discriminate the truth at once, if it be an intelligence. Nor can I understand how the mind can convert different kinds of vibrations into knowledge.

Janus—That is a riddle, and has been so for ages. Even the best educated men have been deceived by the evidence presented to their senses; and if the mind were an entity independent of the body, it could not be deceived so readily and constantly by the information derived from our senses.

We know that we cannot really create anything, neither matter nor force. We know that one kind of force can be converted into another, and the new force can be reconverted back again into the original one without any loss; but there is always certain means and instruments necessary in the processes.

The different organs of the body are simply "instruments," and the impulses which they receive are different from the impulses which they yield; but exactly how or why one organ acts in one way and another in a different way may not be known. That which we can do is to recognize that it is done, and what it is that will modify the result of the action, and note the consequences. We may, however, be quite certain that there is just exactly as much energy applied to the organ, in some way, as there is energy derived from that organ.

The liver, kidneys, heart, lungs, muscles, glands, nerves, and the special senses, have each a special function to perform; we note that each of these organs is constructed differently from the others, and we take it as a matter of course; but when we come to inquire what the function of the entire being is, and whence arises the MIND with its phases, we meditate in wonder, although we know full well that the organs of the body keep changing continuously in their actions, and that the organs in one are very different from those in another being. Yet we know that the "organs" do not make the mind, although they modify its character. In our dilemma we are liable to accept the conclusions of certain men who are known to be very wise, and from their conclusions and opinions allow our investigations as to its real nature to cease, and thus our whole lives are moulded by the teachings of others who have never demonstrated the truth of their conclusions.

With due respect for the opinions and beliefs of honest and intelligent men, we are nevertheless perfectly certain that the body and brain constantly form the mediate instrument used by the forces of nature to manifest the qualities which are inherent in the THREE different sources of MIND, and that the mental manifestation will vary with any variation of the "instrument" and with any modification of any of the three sources of the impulses which assemble to produce the mind.



Since the instrument is living, it is constantly subject to variations. These may arise from different states and conditions of any one organ, due to their growth, development, and functioning differing within the limits of health, or from the effects of any disease. But as the brain is the portion of the mechanism where in the THREE sets of forces meet and mingle, we should more particularly study it in order to satisfy ourselves regarding the method by which the forces become assembled, and through which the assembled forces are blended or else separated in such a manner that the qualities, faculties, powers, and attributes, inherent in the different sets of forces, become manifested as qualities of the mind. This occurs much on the same principle as the different "colors" are manifested upon a spectrum when the rays of sunlight are passed through a prism; or as the chords of sweet music fill the room, when certain forces applied to the "instrument" vary, and as they are divided and dispersed by the instrument.

The product derived from the commingling of different forces varies with the size, shape, and relation of the parts as well as the "timbre" of the instrument. In the living being the age, health, degree of development, practice, or cultivation, etc., as well as the frequent change of environments, render a much greater field for variation of the result produced by the forces than is possible in an automaton.

Zeno—How do you classify the forces into THREE groups?

Janus—(1) Impulses which ascend from the different organs of the body. All of these are conveyed towards the brain by nerves. Since the state and condition of the organs change, so also must the impulses from this source. And since they originate in the organs, we will call them "organic."

(2). The "Special sense" group. The special senses are five, and these convey impulses to the mind from our "environments." Since both the environments and the development of each of the five systems are very various, and continually varying, so also are the impulses varied. These five sets of nerves for sight, sound, smell, taste, and touch, all convey impulses INTO, but never out of, the brain. Other sets of nerves convey mental orders, either conscious or subconscious, out of, or away from, the brain, as one main center, although there are many subordinate nerve centers.

(3) The Primordial. These come from, belong to, and originate in the ether which continues to vibrate throughout each and every cell that lives.

Descartes makes a very nice comparison between certain instruments constructed to respond to the force of water, and the human being under the force of mental impulses. Thus he said:

"You may have seen in the grottoes and fountains of the city gardens, the force with which the water issues from the reservoirs, as it is sufficient to move machines, and make them play instruments, or even to produce sounds like words, according to the different disposition of the pipes which lead the water.

“And indeed the nerves of the human machine may be very well compared to the pipes of the water works, its muscles and tendons to other engines which seem to move them; its animal spirits to the water which impels them, to which the heart is the fountain, while its cavities are the general office.

“Moreover, respiration and other actions, as are natural and usual in the body, and which depend on the course of the spirits, are like the movements of a clock, or of a mill, which may be kept up by the force of water.

“The external objects, which, by their mere presence, act upon the organs of the *senses*, and which, by this means, determine the corporeal machine, to move in different ways, according as the parts of the brain are arranged, are like the strangers, who, entering into some of the grottoes of the water works, unconsciously cause the movements which take place in their presence; for they cannot enter without treading upon certain planks, so arranged, that if, for example, they approach a bathing Diana, they cause her to hide among the reeds; and if they attempt to follow her, they see approaching a Neptune, who threatens them with his trident, or, if they try some other way, they cause some monster, who vomits water in their faces, to dart out; or like contrivances, according to the fancy of the engineers who made them.

“And, lastly, as the rational soul is lodged in the machine, it will have its principal seat in the brain, and will take the place of the engineer, who ought to be in that part of the works with which all the pipes are connected, when he wishes to increase, or slacken, or in some way alter the movements.”

There are millions of instruments that can sing, whistle, speak, walk, run, jump, and perform many of the movements of the living animal. We are familiar with the wonderful Cinematograph, the moving picture system of instruments, all of which are purely mechanical; yet if one says that the MIND is produced by “forces” acting upon an instrument or any kind of mechanical contrivance, or even compare mind to force, one is liable to be considered foolish, and as a speculator, although everyone is acquainted with the marvelous power of the phonograph, and the wonderful dissolving kinemacolor vitagraph, capable of reproducing many of the beauties of nature and of art.

One very great difference between mechanical instruments and the human instrument is that the mechanical are automatons, generally capable of performing only one feat, with modifications, changing with the forces applied; whilst the human is capable of performing the functions of several machines combined, and is not only modified by the forces applied, but the “instrument” itself keeps continually changing in its actual composition, in such a manner that the general appearance remains the same but the fabrication of the tissues is on the move,—like as a river, which remains as a river, but the water gradually moves along.

The inimitably delicate mechanism of the human machine, with its



complex system of parts, which we call organs, is nevertheless a certain kind of an instrument, and capable of responding to certain modes of force applied to it, some of which come from the "organs," others from our "environments," whilst it responds to the vibrations of ether, and at the same time impresses the ether with impulses derived from the other two sources. From the combination, modification, amalgamation, and disposition of these three series of forces, it renders the mind with its phases manifest. The qualities of the mind must accordingly depend upon not only the state and condition of the "instrument," but also upon the inherent qualities of the forces which are applied to the instrument.

Another very great difference between the human and a mechanical instrument, is due to the fact that the brain is so constructed that it can retain impressions which it receives, and these are reproduced sometimes in the MIND afterwards. There is a very great difference between "brain-instruments" in this respect, and some are only able to record certain of the impulses which arrive; others are capable to record other varieties of impressions entirely different. From the varieties of "brain," owing to its size, shape, and structure, in addition to the very wonderful capacity it possesses of recording impressions (all of which it receives from the "special sense" group), that we are led to believe that the mind force originates IN the brain itself.

It is due to the seriatim arrangements of these impressions made in the inimitable construction and extremely delicate elements in the cells of the brain that "consciousness" recognizes the slight differences in the currents of ether as they pass through it, that gives us the power to reason and remember, and manifest "intelligence." The structure differs from any mechanical contrivance which the most ingenious inventor could construct, nevertheless the living being remains as truly an "instrument" as any mechanical contrivance.

The forces which meet in the brain are physical forces, to which the "instrument" will respond, and, because a new appearing force is generated from these forces, does not remove the resultant, MIND, from the list of forces, any more than because electricity becomes dissipated in light, in heat, or some other way, that these latter are removed from the list of physical forces.

The human machine moves in response to impulses received, either from environments or from those originating in itself,—it may walk, sing, talk, dance, seek to attain certain objects, by moving in different ways, and perform any of thousands of different feats, yet each action is in response to certain impulses received. And because the impulses received do not cause us to move, is not proof that the forces are not passing on in the mental current, or being accumulated somewhere in the instrument itself. The mind current even continues when we sleep (subconscious). Mind force

flowing into the universal ocean of force in the universe, and thus disappearing, is no more proof that the mind is not a force any more than does the disappearance of water in the ocean prove that it is not water.

Zeno—It still appears to me that the difference between a living instrument and a mechanical one is due to the physiological forces at work in the different organs IN the body,—for a corpse, immediately dead, is subject to the same external forces as those which act upon the living, and all the machinery is present in the corpse.

Janus—Oh, no; a very important part of it is absent, for the impulses or forces which in life arise from the functioning of the “organs” are absent in the corpse,—metabolism has ceased, nourishment is not taken up, nor do the eliminating and excreting organs act to remove débris. The instrument is broken and useless.

Again, the “special sense” organs belong to the organic system, being “organs” and being dead, they cannot convey impulses of light, sound, or any other.

It is the same with the brain itself. In other words, life force has ceased to maintain the physiological in concord with the chemical,—or the rhythm which exists between the chemical and physiological groups of etheric waves during life, ceases at death. Discordance existing in the cells must be accompanied by discordance of all vibrations which pass through the entire system.

Upon examining the living physical body or instrument, we will discover that certain of its parts are directly responsible for some of the qualities of the mind,—and because the “special senses” have special functions to perform, independent of actual physiological functions which are required to maintain life, and from the very great importance which they have with reference to the MIND, bringing it into relation with the outside world, we are compelled to separate the qualities of the mind which are due to the action of these special senses, into a separate class, for from this source there are derived certain special mental qualities, very different from those derived from the other organs, and for this reason they are in a class distinct.

The mind depends upon, but is not due to, the different sets of organs of which the “instrument” is composed. It is very desirable to review the relation which the different organs bear to the entire mechanism.

Zeno—That should be interesting, but if the variation existing among the parts of the instrument varies the qualities of the mind, or if the altered state or condition of any organ changes the mind, how are we to tell whether or not the mind originates IN the body and brain or not?

Janus—If the living instrument could retain the same unchanged and unchangeable MOLECULAR state, like the molecules of a PRISM do, yet still be able to admit and assemble the impulses towards the brain as it does in the normal state,—then the mind would only consist of ONE thought, and that thought would remain as stationary as the spectrum of light. Such is

not the case, however, for, momentarily, the molecular fabrication of the tissues of which the "instrument" is made, keeps changing, and the different kinds of forces which act upon it keep changing constantly also, in their amount, kind, and proportion, from each of the THREE different sources,—these forces come from (1) the organs, (2) from the environments, (3) from the Primordial.

A musician keeps changing the forces as he manipulates the keys, to produce the varied sounds, yet the instrument remains the same.

We might keep changing the amount and qualities of the rays which pass through a crystal prism, and we would find that the "spectrum" would keep changing accordingly. Still in both cases the "instrument" would remain identically the same.

But, when the "instrument" is living, the instrument keeps changing, as well as the forces, and from the fact that we ourselves are the instruments, and LIVE WITHIN THE INSTRUMENT, or picture machine, accordingly the picture perceived by consciousness is a continual "moving picture," and the scenes presented to consciousness is what we call MIND.

"Scenes" referred to here include not only those presented to "vision," but to the other senses also. But we must remember that we do not SEE OUT from us with the eye, but only with the MIND, because the "special senses" only bring IN impulses to the MIND. It is therefore only the "spectrum" or MIND which GOES OUT, and in this mind current the thoughts and ideas are formed.

There is plenty of room within a single brain cell to record the history of a lifetime. Consider the extreme delicacy of its structure. A brain cell is a jelly-like substance only about  $1/125$  to  $1/500$  of an inch, delicately branched with long fibrils. It is generally nucleated, and possesses a delicate membrane enclosing the more fluid contents, through which we sometimes observe very fine trabeculæ, and perhaps a nucleolus within the nucleus. All of the cell is composed of albuminous substance (protoplasm), which has at least 4 chemical elements. The smallest portion of a cell has in it millions of molecules, and each molecule several hundred atoms,—and each atom has thousands of "electrons." These electrons and atoms are in a state of very rapid motion within the boundaries of their prison, the molecule, yet all of these inconceivably delicate things retain their relative and respective positions with reference to each other, and each one is agitated by and communicates impressions upon the utterly inconceivably minute waves of ether, and at the same time undergoes substitution changes, in that fresh elements are taken into the molecules, and those which for the moment form some of the constituents, pass out of the molecules and cells, and are cast off or become "eliminated" from the cells, the organs, and the body; and the elements which are taken in, and cast off, differ in each kind of cells throughout the body. Is it any wonder that the ingenuity of man fails to construct



such an instrument? Nevertheless, that is the kind of an instrument required to manifest MIND.

Throughout the organs of the body there are systems of nerves, which assist in regulating nutrition, and convey impulses from the working cells to the nerve centers, and carry other impulses from the nerve centers back again to the cells. Those nerves which convey impulses up to the centers are called "afferent"—those which carry currents from the centers to the cells are called "efferent." Their function is different, their processes are "subconscious." Hence it is the subconscious part of the mind which carries on the processes of nutrition. The process continues during sleep even better than during the waking periods, and they occur as well in lower animals as in those with highly developed brains.

The blood carries the same materials to all cells, but the latter have power of selecting the elements required by their individual nature. The quality of the blood differs much,—it may be rich or poor in red or white corpuscles,—it may be watery or thick,—rich in fibrine or non-coagulable,—flow fast or slow,—have great tension in the vessels, or the vessels may be very compressible,—it is venous or purple color in the veins, livid or scarlet in the arteries,—loaded with debris or quite free,—it may carry poisons, toxins, diseases, or be free from them,—absorb the fluids and gases from the inside or from the outside of the body,—or it may be free from deleterious substances such as alcohol, narcotics, stimulants, depressants, and alterative medicines whilst all the time it pulsates through the arteries at the rate of 6 or 7 miles per hour.

Since the blood comes in contact with the tissues and cells, and by its substance feeds them, or supplies them with food by which they carry on the metabolism in their interior, it is evident that "impulses" coming to the nerve centers, will be modified greatly by the different states of the blood.

The organs themselves differ much in size, development, age, activity, etc. All impulses from the varying state of the organs and of the blood are "organic," and affect the character of the MIND.

The "special sense" nerves, for hearing, sight, smell, taste, and "feeling," are distributed to the "superficies" of the body, and by their outer brush-like terminal fibrils collect impressions from our "environments."

These impressions are transmitted to many different centers in the brain, and thus they convey to the sensorium, knowledge of the outside world.

The optic nerve is spread out in the retina, which forms the inner coat of the eye, and with the assistance of the transparent humors of the eyeball, gathers up, conveys, and distributes the vibrations received by way of the optic nerve to the brain, which so affects the impulses received that the mind becomes conscious of color, shape, size, and many qualities belonging to the object seen by the MIND.

The auditory nerve is spread out into a very numerous brush-like series

of fibrils, and distributed within the cochlea and semi-circular canals. These also collect different sized vibrations which come from the outside world. Impulses thus received are conveyed by the auditory nerve to be distributed into different "hearing" centers in the brain. From this source the MIND gathers information called "sound."

The olfactory and the gustatory nerves are also spread out upon the nose and tongue respectively, and gather up and convey impressions from the outside world.

Nerves of "feeling" are extensively distributed to all parts of the skin, and mucous orifices principally, and bring the mind information concerning the "feel" of things,—heat, cold, smoothness or irregularity, weight, softness, hardness, etc.

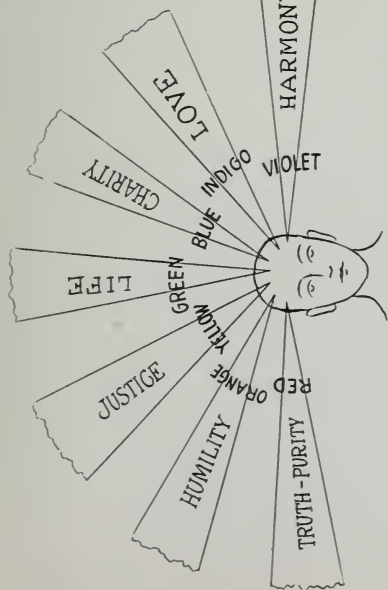
The organs of the body are mostly all double, one on each side, but by means of the nerve fibres crossing to opposite sides the entire body is really ONE instrument.

The special sense nerves, particularly, are connected with ganglia which may be found mostly near the base of the brain—five on each side. And they are said to originate in "roots," which can be traced to the ganglia and to the floor of the fourth ventricle, which is above the medulla, and under the upper brain. By regarding these inner ends of the nerves as "roots" one is liable to be led astray with reference to the direction in which the impulses travel, for it is well known that the outer brush-like terminals of the nerves is that which first receives the impulses, and therefrom are conveyed to the "roots." These nerves never convey impulses in the opposite direction. Nevertheless all nerves are said to act "reflexly," and the outgoing impulse does not travel in the same nerve which brought in the corresponding sensation. There is a great difference in the latitude of response which can be made by different nerve centers. Those of the brain have much greater latitude than any others. The peculiarity of the "living machine" is that it does not respond to impulses like an automaton,—for even the subconscious mind can send back one kind of a "reflex" at one time, and another at a different time, to the same stimulus. An automaton always sends back the same kind of response to the same kind of stimulus, or force applied.

The "reflex" power can be educated by frequent repetitions of the same stimulus, so that the response is made directly, and of a certain kind, to a particular stimulus. The musician by practice can manipulate the keys without "thinking," so it is with mostly all artistic performances. This is because the nerve center develops, so that it can send the response which is suitable, without having to call for the direction of the "attention."

The medulla is shaped something like a wedge, being narrow below, where it is continuous with the spinal cord, and wide above and greatly expanded where it spreads out into the upper parts of the brain.

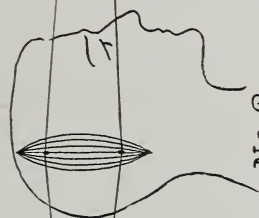




No. 1

### Prismatic Diffraction.

Indicating the general  
effect of the human brain  
upon Mind Ray  
Impulses.



No. 2

### Lenticular Concentration.

Indicating one special  
Shade of Character or  
special kind of Mind  
exhibited by one individual.

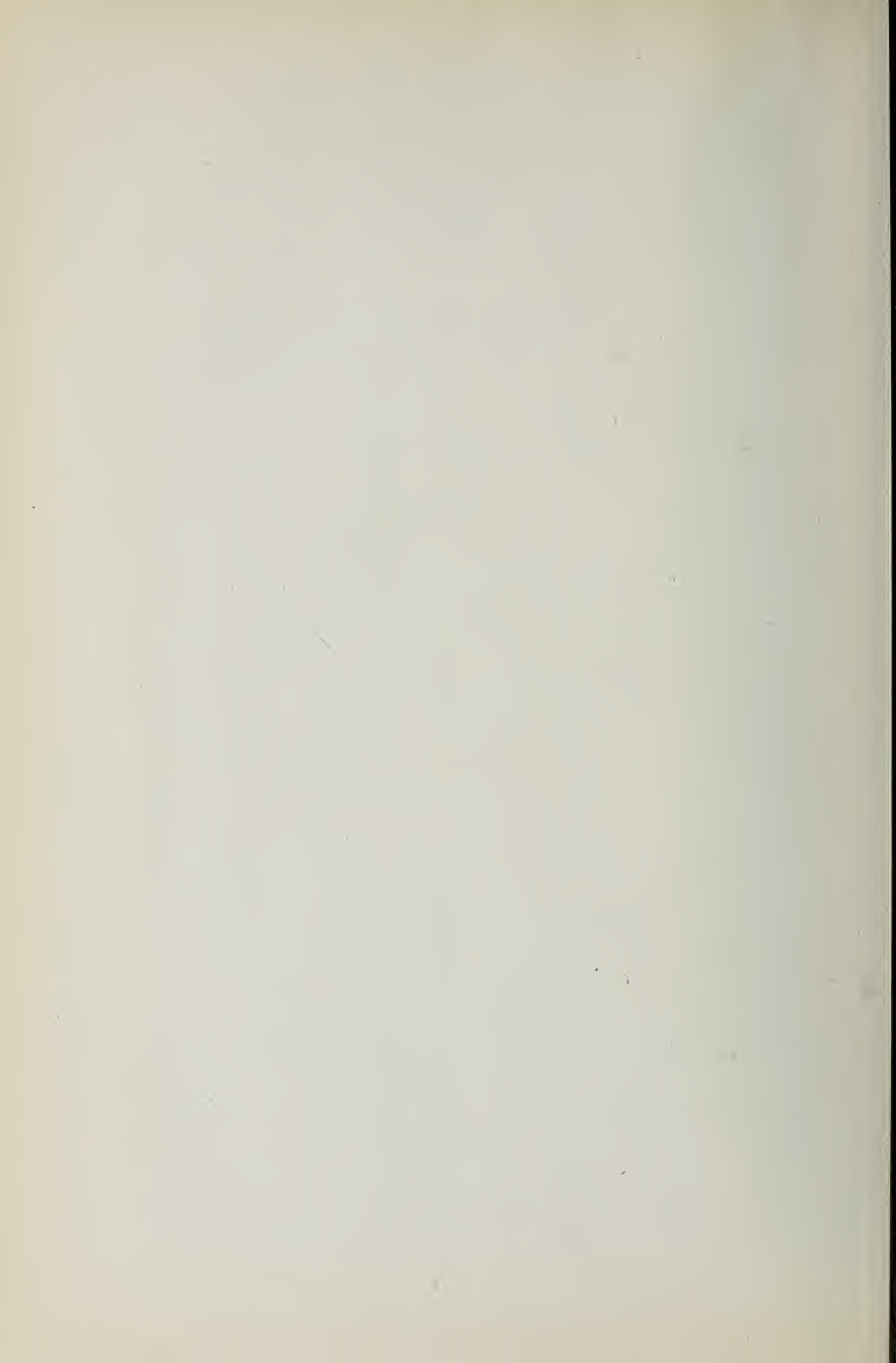
EXAMPLES OF HARMONY

MUSIC  
MATHEMATICS

No. 3

Mind Focus,  
Talent perfection  
in one direction  
or one special  
quality, "Harmony"

Diagram No. 6



By its shape, and the arrangement of its fibers, it serves to diffract, or separate, the millions of vibrations which come to and go upwards to the cerebrum and cerebellum.

By widely separating the ascending impulses (rays) it performs the same kind of effect on them as a prism does upon the rays of light which pass through it. You note that the shape of the medulla is something like that of a prism.

The large upper portions of the brain are different, for they are, taken together, something like the shape of a large lens. (See diagram No. 6.) Its billions of cells of grey matter are arranged similarly on both sides. Accordingly, two cells, one on each side of the brain, are alike in shape, structure, attachments, number of prolongations, and relations to its neighbors—hence they perform the same function.

Owing to the lens-like shape of the entire upper brain, and vibrations of ether which pass through it, must have a tendency to “focalize.”

By its action upon ether vibrations passing it, tending to focalize them, the brain acts as a compound lens, being made of many parts which act in concord with each other.

With the “living lens” the focal center can shift rapidly; herein there is a great advantage gained over a non-living one, in which the molecules are coherent, and accordingly always transmit the rays passing it in the same manner. It is not necessary that the “focus” be a point, in the living “mind” spectrum; it may be a variously sized figure, and the figure possess all the characters of “relief.” This shifting and enveloping character of the “focus” is evidently due to the partially independent action of the separate cells, or rather pairs of cells—one on each side of the brain—hence the image or the “object” of thought becomes surrounded, as it were, with myriads of “thought foci.”

Zeno—then you think that the impulses first come into the brain and become spread out by the medulla to the different centers, and as the ether vibrations pass through the upper brain they become focused as you describe? But how can impulses which travel only in nerves, proceed any farther than the brain centers? One would think that they, like electrical currents, could only travel as far as the “wires” extend.

Janus—It is true they could not travel without some medium to travel in, but you must remember that there is the THIRD source for mental impulses—the Primordial—which not only supplies certain impulses, but supplies a medium in which they can travel, namely, the ether, with its vibrations.

The ether is always and everywhere present, and it becomes impressed with such impulses as come to the brain by way of the nerves, and it thus becomes the basis of mind currents.

The ether is so sensitive that it becomes impressed by the motion of even an atom of hydrogen in the atmosphere of a star billions of miles away, and

the impression thus produced on it is conveyed by it all the way to the earth and can be recognized upon the light spectrum as a Fraunhofer line. Why should the same ether not become impressed by an atom of hydrogen or even an electron, moving rapidly within the compass of a molecule in a brain cell?

Ether vibrations are outside of the brain, and also in it, and its sensitive qualities are as great one place as another. The infinite, vibrating, limpid ocean of ether, whose delicate undulations pass through the "instrument" of the mind, reveals, by means of the living machine, not only its own qualities, but also the qualities impressed upon it at the MIND center—the brain—which it receives by way of the nerves, both from the "organs" of the body, and the "environments"—which latter are impressed upon it by way of the "special senses."

The nerves and brain merely classifies the vibrations and by its shape and the molecular mobility of its ultimate structure, combines and "focuses" them into myriads of continuously changing series. Thus the brain is a "moving picture" machine, and its spectra appear to consciousness as "thoughts," and these tend to mould one's features,—hence we often see "the mind" reflected in the face and features.

It is not necessary that the "mind foci" extend far away to enable us to picture any object, or scene, even if the object of thought is far away, because the impressions which we have received concerning anything, are located in the brain,—hence it is just as easy for one to think of the north star, for instance, as it is to think of an electric light close at hand.

The human brain "instrument" can only manifest the qualities inherent in the forces which act upon it, because MATTER cannot generate qualities. Matter has properties which appeal to our senses. Matter receives and modifies forces, but energies which act upon matter are entirely different from the matter itself. Even the properties which are possessed by matter are due to certain forces which act upon, or in it.

The weight of anything is due to the "forces" of gravitation. The chemical forces which molecules possess, by which they manifest the particular properties or qualities of anything, are forces still. Even the properties of ether enabling it to convey energy and "light," does not identify ether with the "force" which moves it.

Our senses bring into consciousness the properties and qualities of matter, but it is the mind which is informed by the senses, and it is the mind only which appreciates the qualities of "forces." Therefore the qualities, energies and attributes of the mind are derived from the forces, and are therefore inherent in them, admitting the fact that the "machine" modifies the forces which act upon it.

It is certain that the THREE kinds of energies which assemble at the brain, disappear as such, but where are they gone? They cannot be annihilated; we must account for them. We cannot observe the transformation taking

place, but we know that the mind can be traced to the brain as a center where the forces disappeared,—The only natural conclusion that we can come to is that the physical energies assembling at the brain have been combined in some manner to produce the MIND (objective mind). Therefore, also the qualities of the mind are traceable to the forces which produce the mind.

Brains differ in shape, size, development, and the cells differ in the number and kind of impulses they have received, by way of education or otherwise, nevertheless the forces of the mind do not originate IN THE BRAIN.

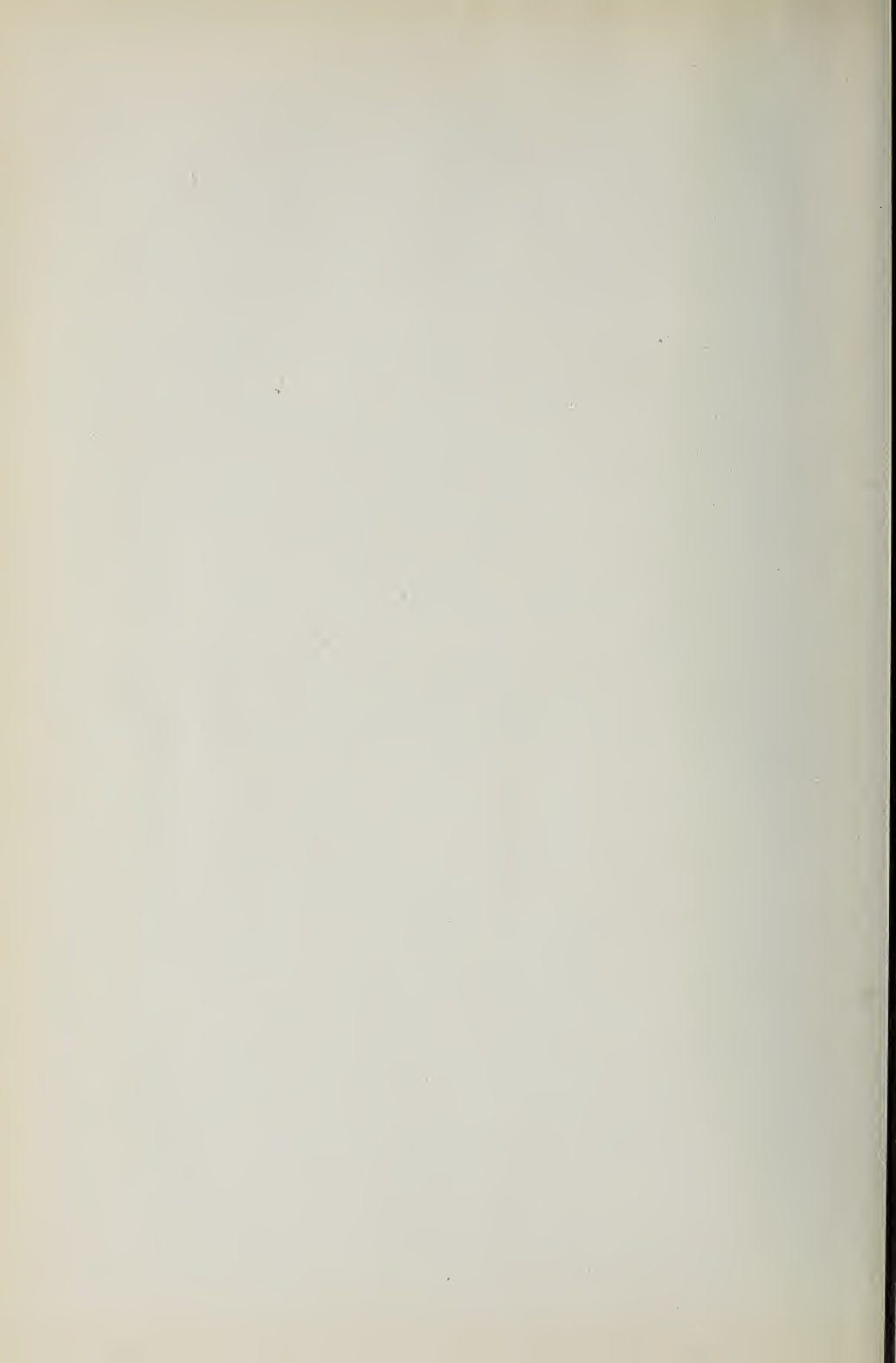
When one goes to sleep, it is the "special senses" which sleep, still the mind current goes on (unconscious mind).

The liver becomes inactive and melancholy ensues, the mind is perverted but it is there all the while. Even in insane persons the mind is present and only altered because there is something wrong with the "instrument."

We should try to find out which of the mental qualities originate in each of the three sets of forces, because by ascertaining this it would be an easy task to study the mind, and if we could recognize whence arises the qualities of the mind, we would be in a much better position to remove the cause of any mental deviation occurring, and also know better how to improve the standard of the mind.

The brain is the LOOM which weaves together the three sets of forces of which the primordial is the WARP, whilst the "organic" and the "special sense" impulses constitute the WOOF of the fabric MIND. The THREE sets of forces form the "legs" or "feet" of the TRIPOD and the brain is the "seat" of the mind.





## CHAPTER 4.

### THE INVISIBLE HEADLIGHT.

#### THE BRAIN TENT.

Notes by Zeno—

Zeno—Notwithstanding all you said about the “instrument” of the mind, there must be some definite relation between the mind itself and the hypothetical “time measure,” for the mind is made of “forces” and all forces remain in the “vertical present.” It is difficult to understand how the mind can remain in the “present,” since one can think of the future and the past as easily as of the present.

Janus—You can direct thought in any direction in space, and every direction is present: if you think “of” the future, you do so IN the present, in just the same way as you think of anything in space. You think of the past in the same way.

The records or impressions made in the delicate structure of the brain occurred one after another, always in the present, and all that yet remain are also strictly in the present. Infinitely delicate ether currents pass through these records and are affected by them. To look back over them is the “past,” to project them forward in the opposite direction is the “future.”

The brain allows some rays to pass clear through it, others cannot pass, owing to their being absorbed or focused within it. There is a great difference in the penetrating power of different rays, and much difference also in different substances. X-rays will pass through a book, light rays do not—X-rays do not pass through leaded glass, but light rays pass readily. Red rays pass through a fog, violet rays become bent and fail to penetrate very far.

There are billions of ether vibrations much finer than X-rays, and there are others with much greater penetrating power than those of light and heat.

When vibrations pass through substances they invariably change more or less in their direction, and bend towards the thicker portion of the body through which they pass. For this reason they tend to focus when they pass through a lens, and they diverge if they pass through an instrument which is thicker at the margin than in the center.

The human brain is oval, longer from behind forward than from side to side. The front of the brain is narrower than the posterior part. Rays from any direction passing through it will accordingly tend to focus in front. Unless there is some other influence operating, we naturally “think” of things as if they were in front of us.

Single celled creatures, like the amoeba, change their shape more or less, and their bodies are translucent, indicating that even some of the rays of light are absorbed within them, and that other rays of light pass through and focus outside, or, if we choose, in front of them. Accordingly as the amoeba changes its outline, so the position and qualities of the "focus" change also. If the creature projects a small horn, the focus will be further away than if the body is oval or rounded. If its form is concavo-convex, the focus on one side will be much further away than on the other, and opposite the concave side there will be a kind of ring shaped beam of rays, which by the deepening of the concavity will form a sort of miniature caribdis, into which the prey is engulfed, and sinks into the hungry maw of the devouring amoeba.

A drop of swamp water magnified about 10,000,000 times by the photograph and moving picture process exhibits thousands of creatures, thousands of times smaller than an amoeba, swimming, diving, cavorting and chasing each other in the abyss of the ocean, made of a single drop of water. When one of these creatures is pursued by another it changes its course quite suddenly, and just as promptly the pursuer changes its course, much in the same manner that a hound pursues a hare. These creatures are governed by what is called INSTINCT, and it is evident that they are governed by intelligence of some kind, else how could they recognize the danger and the prey?

The rays of ether operate in the same manner whether a large instrument is used or a small one. There are vibrations infinitely smaller than these creatures, as much smaller than they as light rays are smaller than the amoeba.

The different organs in the body are adapted to their respective functions, and they become organized for the purpose of increasing their power and efficiency in executing their function.

The eye is composed of many millions of cells, and each particular part of the "organ" is placed in the best position it could be to carry on its work. The cornea and the three humors are transparent, the nine layers of the retina are arranged systematically and still further modify the rays which have been focused so that they fall upon the "rods and cones," more especially upon the "yellow spot of Somering." From the retina the impulses pass along the optic nerve and are widely distributed into different regions of the brain, and being thus separated, become recognized by the mind as different "colors." Colors are MENTAL IMPRESSIONS.

In exactly the same manner ALL the "special senses" collect and distribute impulses which are derived from different kinds or modes of vibrations or rays, so that the brain is the place where all of them are widely distributed apart, not only to the ten large ganglia near the base, but, especially those of feeling, to the upper and anterior and lateral surfaces of the brain.

The spinal cord and medulla convey and distribute a continuous stream

of impulses to the brain also, so that it is literally filled with many millions of incoming impulses all the time.

During all this collecting and distributing process the ether currents keep passing through the brain, and these currents of vibrations are necessarily modified by the collected streams referred to a moment ago, and owing to the general shape of the brain the through-going vibrations tend to focus in front of the head generally. Independently of the general focus, each cell of the brain produces some influence upon the general focus, or rather each pair of cells, one on each side of the brain, being of the same form and structure, tend to produce an independent focus of their own.

Zeno—I would gather from your description that the instinct of minute creatures like the amoeba corresponds to the mind in man, the great difference being the greater assembly of impulses and greater efficiency of the senses in collecting the vibrations; but I fail to understand the relation of MIND to TIME, for even if the vibrations of one kind are collected and another kind pass through and focus, and they focus IN the present, one would think that the concentrated rays would project to one or the other side of the “big wheel.”

Janus—No matter what one thinks “of,” no matter what object attracts our attention, whether it be the “past” or the “future,” or even any abstruse subject, the MIND FOCUS remains IN the present, because it is present in every direction. You must remember that “the time measure” is purely hypothetical, and that TIME is merely a “mental impression,” and that it runs at right angles to the “big wheel,” and since the mind records events seriatum, according to what we regard as “times,” therefore the POLE of the MIND is along the line of time, or in our TIME MEASURE. And since we know that the aim of our minds is to attain HAPPINESS, therefore HAPPINESS corresponds to the “pole star,” and “success” corresponds to the “north electric pole.”

The “north star” (POLARIS) is the point in SPACE to which all bodies of matter point, and the “electric pole” of the earth is the direction of the magnetic needle (representing matter); or the electric pole is said to “attract” the needle. The north star and the north electric pole face each other in all positions of the earth and other bodies floating in *space*, in the same way that “happiness” and “success” are always in the same line with reference to *time*.

So far as “forces” are concerned, of which the mind is the resultant, the “forces” remain in the “big wheel” with the billions of bodies of matter from which they are inseparable. The element TIME is absent with MATTER and FORCE. So far as matter and energy are concerned there is no “past” or “future,” because it is always “present.” Matter deals with “space”; MIND deals with “times.” Success and happiness lie in the future. Success does not bring complete happiness, and since it has been discovered



that complete happiness cannot be attained during life, we become persuaded that it will be finally achieved in Valhalla, Nirvana, The Happy Hunting Ground, Heaven, Paradise, etc., wherein will be found those conditions which are believed will afford complete and unbounded joy or perfect happiness.

FORCE or ENERGY are like the other side (subjective side) of MATTER, and represent "SUBSTANCE" (from "sub," meaning "under," and "stare," to "stand"—that which "stands under matter"—substance).

Mind deals with times, and holds a similar position with regard to "Time."

The "objective" of MIND is "happiness," the "subjective" is "energy." The latter remains IN the present, but the former is always in the "future," and that is the reason why it cannot be attained, because we cannot enter into the future.

The relation of MIND to energy can be very well represented by means of a diagram (see Diagram No. 7), wherein the mounted needle, free to turn in any direction, represents the current of thought; the pivot is the individual; the right hand side represents the future, the left hand side the past, and the vertical line is the "present."

Upon the margin of the diagram notice the words written; to the right you see money, affluence, praise, vanity, baser passions, etc.; these are samples of the "attractions" which usually inspire the mind and mould the thought daily, as evolution progresses. Success in the attainment invariably lies in the future, because it is believed that a certain amount of happiness will be enjoyed by possession or in indulgence.

It would be much better if the diagram could exhibit a large hollow globe, with the needle suspended in the center, so that it would turn in any conceivable direction, like the mind can, and be directed to any point in the universe, from its central "pivot" in the brain; but this cannot be done so easily as to make the exhibit as a flat surface.

To the left side of the diagram read the words experience, memories, education, reason, health, development, heredity, etc. The character and qualities of the mind are greatly modified and its power sometimes greatly increased by these elements, because they may produce a better "instrument."

The vertical line in the diagram is a section of the "big wheel" which contains everything there is in the "vertical present," life, force, matter, and the subjective end of "thought."

"Attention" is the most mobile element in the composition of the MIND, and it keeps shifting incessantly, even when one believes the mind is concentrated upon one "object" (subject ordinarily considered).

Construct, or imagine, we had an immense tent in which millions of minute magnets are suspended, free to turn in any direction. Every one



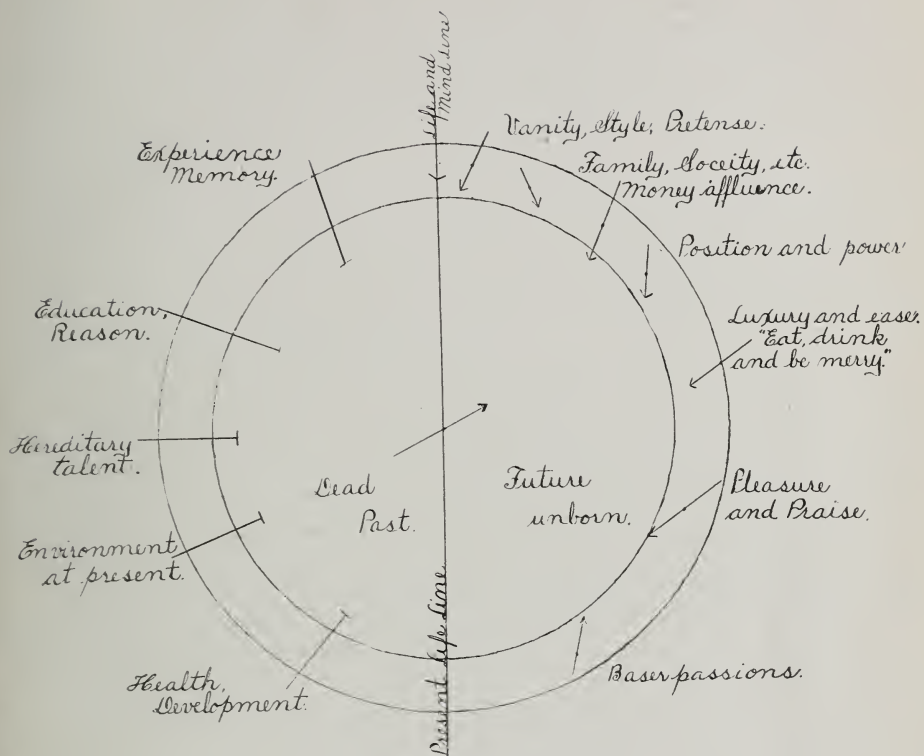
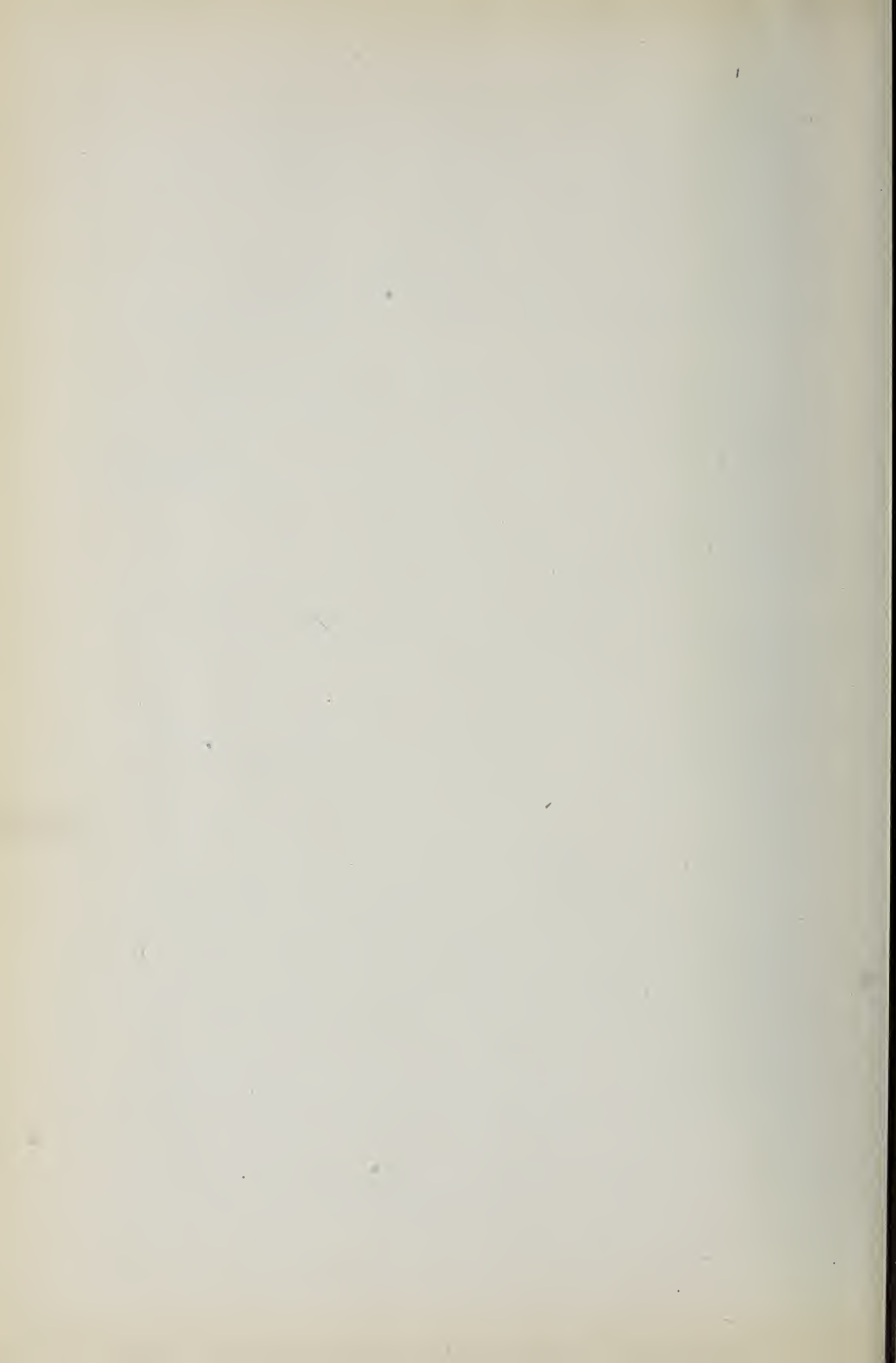


Diagram No. 7

The mounted needle in the center represents the "objective mind," which is attracted by money, that he expects to gain in the future. The other needles mounted on the future side fail to attract this "objective" mind at the present time, but may do so at some other time. The arrows to the left, or on the "past" side, of his life, furnish him with knowledge education, health and all experiences of his life.



of them will point to the north pole, until some more potent influence draws them away. In the immense tent filled with minute magnetic needles, place a magnet; each of the miniature needles instantly points to it. Demagnetize the magnet, the needles again turn to the north.

When the brain first appeared in the ovule, it was but a microscopic bladder projecting from one side of the ovum. Had the brain continued to grow in such a form so that the cells were spread in single file, it would have been as large as a great tent, and filled with serum, in the center of which would be the stem from which it sprung.

Each of the cells in this immense tent is a magnet, composed of countless millions of atoms and electrons, and these inconceivably delicate bodies millions of times smaller than the mind of man is capable of conceiving, are in a state of rapid motion, and their arrangement, or their relation to each other, is altered by certain impulses which come to them in the vibrations of ether in which they swiftly revolve.

As the great general current of ether sweeps through the "great tent," each of the cells (magnets) has some effect in "focusing" the rays, and as the pair of cells on opposite sides correspond with each other, it is evident that there will exist a "cone of rays" whose base is the distance between the pairs of cells on opposite sides of the brain, and the "apex" is the "object" which "attracts" the current.

Place something in the interior of the "brain-tent" which will "attract" the current in the cells. Instantly the current (in the great general tent) is interrupted, and turns to the new "attraction."

The vibrations which enter the brain by way of the "special senses," and are distributed into widely different parts of the brain, bring in and constitute the "new attraction." The "new attraction" vibrations first arrive at two certain brain-cells, one on each side of the brain, which, being in unison, agitate the "serum" of our brain tent synchronously, and at the same time the vibrations which belong to the "general etheric current," become impressed with those coming from the two opposite sides, and alternately interrupt and then chord with them very rapidly, and as they themselves continue to "focus" to the conscious center. The result thus produced is "consciousness," and, since the millions of cells on opposite sides continue to do the same thing with slight variations, the result is that a stream of modified vibrations emerge from the great "brain lens" as from a center, and thus produce "thought."

You have no doubt often visited the new moving picture shows where they exhibit scenes without curtains, plainly visible in mid-air, at one end of a darkened room. This marvelous feat is accomplished by causing reflected vibrations of light from two sides to meet and cross each other in the air. These vibrations of light come from two mirrors whose reflected rays cross each other from nearly, but not quite, the same distance. Hence two pictures

blend as one, because the eye cannot perceive with either set of vibrations quick enough to distinguish that there are two instead of one set of reflected rays.

There are always Two sides, or halves, to the brain, and there is a slight difference in time between the arrival of vibrations from opposite sides, hence practically the same thing occurs IN THE BRAIN as is produced with the crossed vibrations of light in mid-air, as seen in the vitograph without a curtain.

Streams of rays entering the "brain tent" from different regions would necessarily agitate the "serum" in the tent, and there would be some point near the center of the "tent" where the "vibration focus" must exist. This latter corresponds to the "conscious center."

Nature arranged the parts of the brain as it evolved, so that impulses from opposite sides could meet and mingle together, far more effectively than one could imagine would result from a "brain-tent," such as we referred to; but, by means of the "tent" one can gather some idea of the way that interruption and concord of vibrations is produced.

Zeno—Then there must be some single organ in the brain, near its center, where the "focus" of mind rays exists. Do you think that the Pineal gland which projects into the fourth ventricle and is bathed in the brain serum is the "focal center"? It is near the center of the brain, and is single.

Janus—It is quite possible that the Pineal gland has some office to perform with reference to centralizing the rays or vibrations from the opposite sides, but the long fine fibrils, branching out from the cells, as well as the serum which fills the ventricles, chambers or hollow spaces between the different regions of the brain, no doubt form a very important factor in conveying and focalizing the vibrations from opposite and similar cells. At any rate the "scene" is produced, and it is only "consciousness" when the special senses are sufficiently operative as enables them to so excite the "brain-tent" focus as to produce a "*brain center crossing*" of vibrations. This is evidently what produces consciousness; and since former experiences have made their impressions, or slight changes in the brain cells, these inconceivably minute alterations in the arrangements of the electrons of the cells, correspondingly modify the delicate vibrations coming from the cells to the conscious center. Hence the thought originating in an experienced brain is different from the thought coming from the inexperienced brain.

Zeno—When one is asleep, then, the "inner focus" does not form, and the mind current sweeps along to the outside focus without receiving the benefit of the stores of information which have been accumulated in the brain cells? Is that what they call "subconscious mind"? And would not the subconscious current be modified by the records which have been stored in the cells?

Janus—Yes, that is how subconscious mind is formed, and the dream or

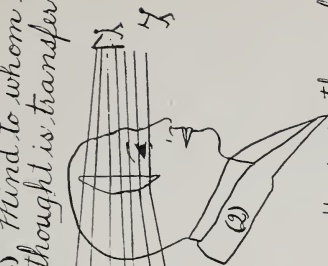
# Thought Transference.

(1) A friend in great agitation of mind after a vivid dream or at time of accident or death.

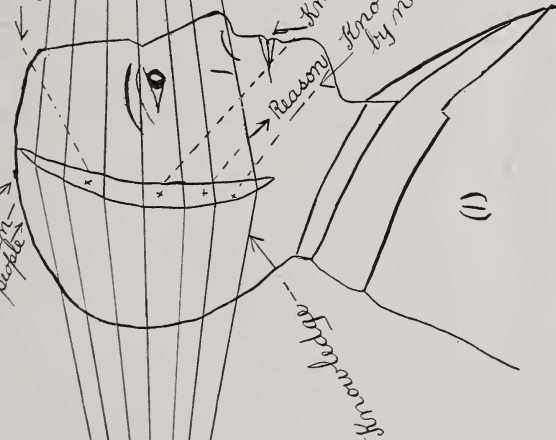
Knowledge of personal history  
Knowledge of the tendencies of other people

Judgement.

(2) Mind to whom the thought is transferred.



He sees the calamity that befel his friend at the distance.

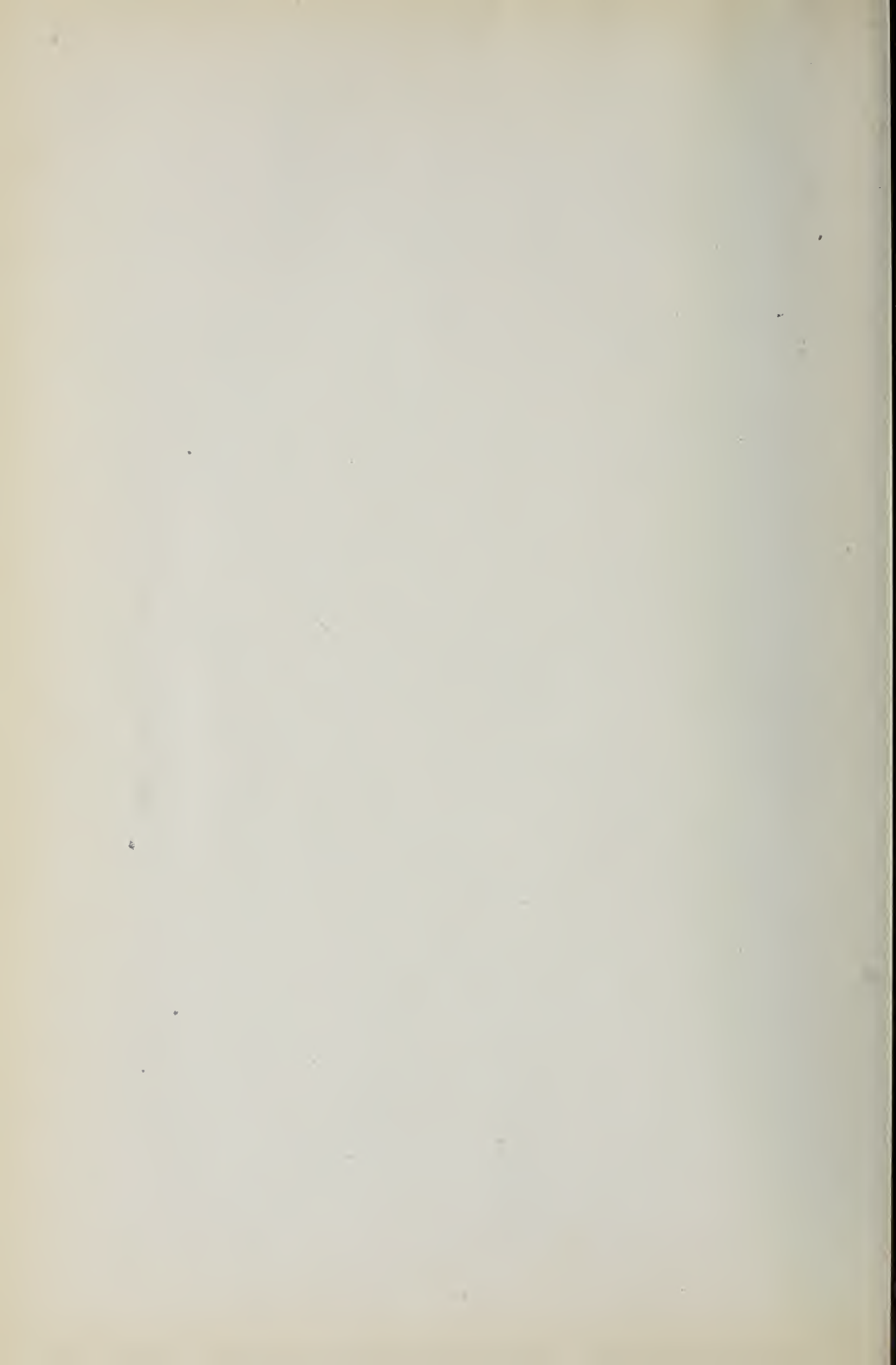


Knowledge of the section of the city where the parties live.  
Knowledge of stress caused by need of money.

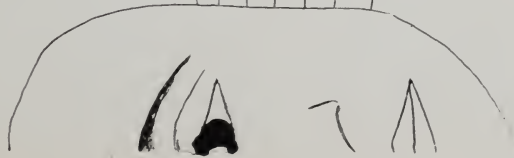
Concording Emotions.

Diagram No. 8



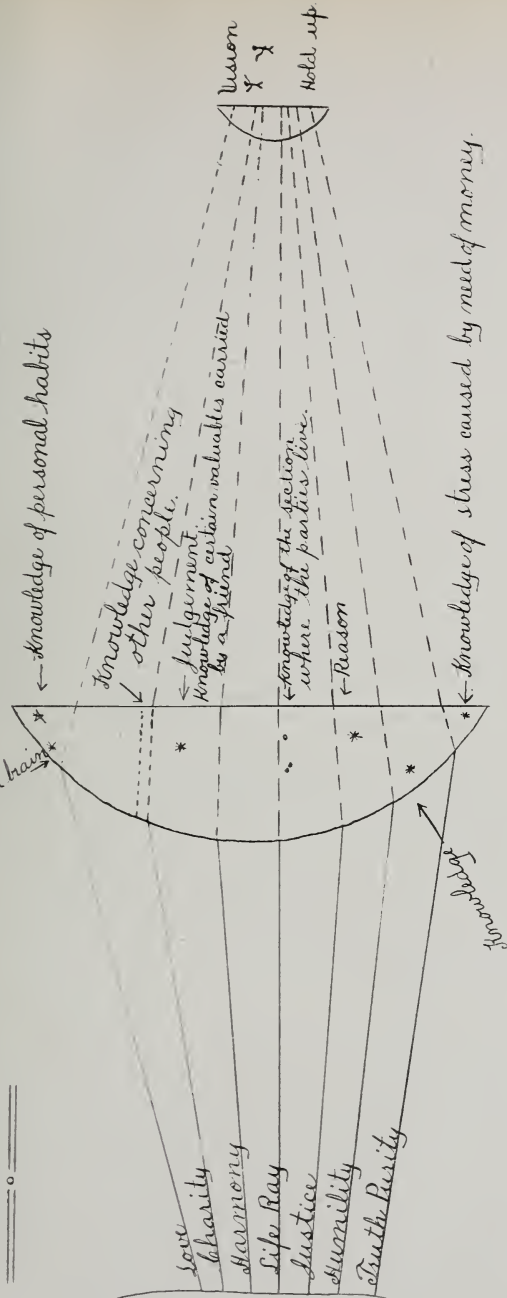


Prime Mind Rays  
passing through  
the brain.



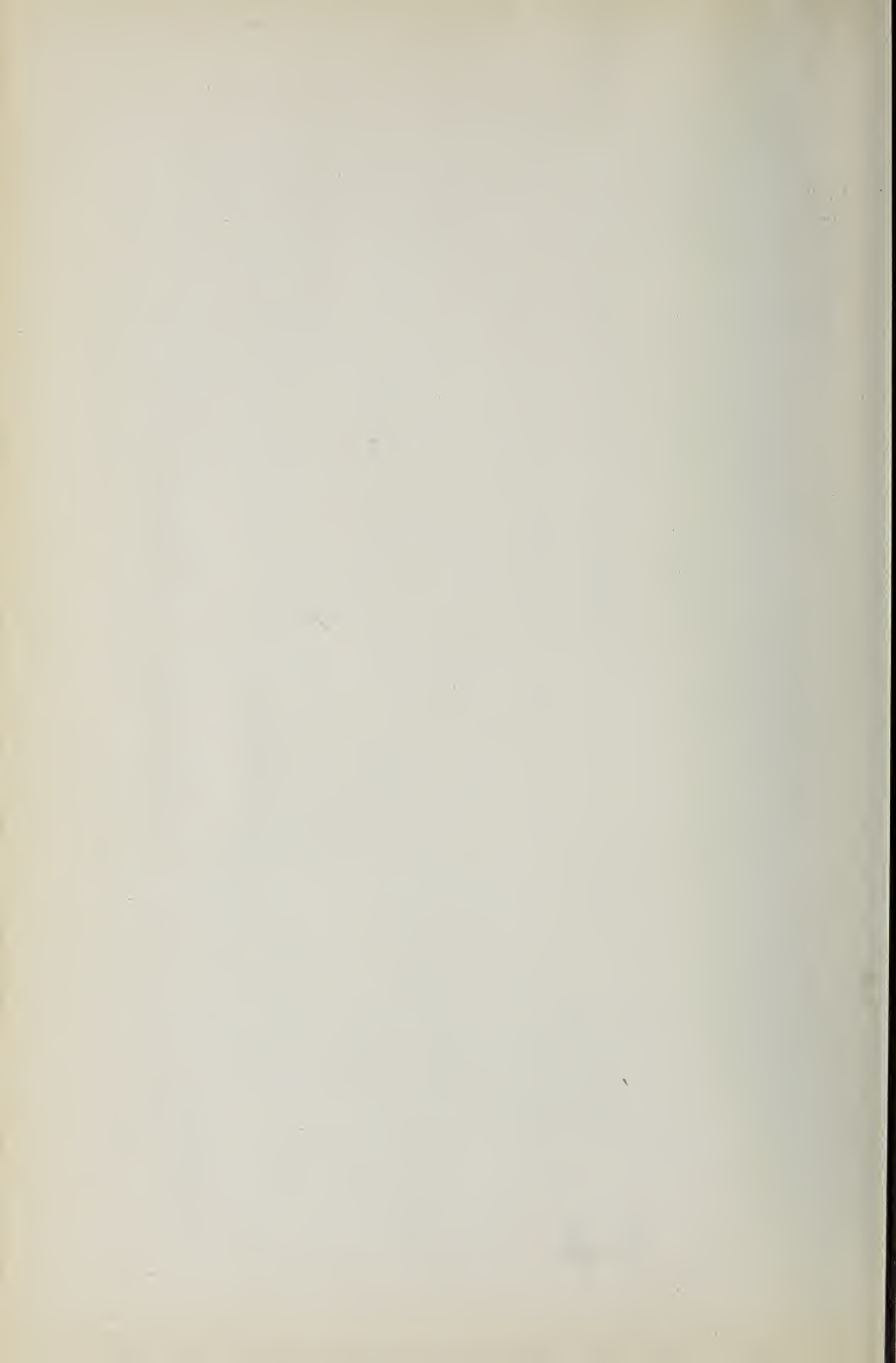
Prophecy, Pre-vision.

Diagram No. 9



Notice. The "knowledge" represented by star points on the lens, may be varied to any extent, according to the facts recorded in any particular mentality.

Notice. This mind ray system applies equally well to the phenomena of clairvoyance, clairaudience and also "mind reading".



the vision perceived by one individual differs from that of another, partly because the "information" stored in the cells of the two brains are different.

Thus we see that subconscious mind and instinct are each formed in the same way and of the same thing; but the subconscious mind varies greatly in the individual case, because of the great difference between brains. The brain of man evolves, but the physical progeny of insects and inferior animals is remarkably similar to the ancestors thereof; accordingly the mental manifestation, or the instinct, remains the same in each species for all time. "Where there is no alteration of structure there is no alteration of function" (Spencer). Like a great and rapidly varying *invisible headlight* this sheet of dissolving foci projects beyond the brain and being continuously. It is not at all necessary that it project very far, because all the records of information and knowledge which we have are stored IN the cells of the brain, and these were all derived from the "special senses." If, therefore, we have knowledge of any distant thing, that knowledge is impressed there with our conception of distance, and it is so reproduced.

When one is blindfolded, brought into a new place, turned around a time or two, one cannot tell in which direction his home is, although he knows full well the definite relation of everything in it. This shows that it is the impression received when learning concerning the location with reference to other things which is remembered. It is the same with all knowledge.

It is this cone of dissolving invisible light that corresponds to the needle in the Diagram No. 7 and very rapidly changes its direction from the past to the future with reference to TIME, revolving about its center, the brain. It becomes conscious when the secondary focus forms within the brain, and in this way becomes impressed with the knowledge of past experiences as they are arranged seriatum with reference to one another, within the electronic fabrication of the atomic and molecular elements of the elastic and compressible brain cells.

Consider all electric needles in the world, focusing at the "pole," and all the poles of the billions of bodies floating in space pointing to the North star, and SPACE is what allows directivity. Temporary deviation from the line is produced by any influence which will overpower or exert a greater "attraction" than the polar influence exerts.

Now we know that the direction of the "pole" is at right angles to the real force exerted on the magnetic body. For instance, mount a soft iron needle within a cylinder around which a fine wire is wound. When the current is passed around the cylinder, the needle instantly assumes a position at right angles to the current. It is the same with the earth. The sun winds his force about the equator mostly and the earth moves at right angles to the current. The north and south poles, being the ends of the axis, are at right angles to the equator.



The pole "success" and "happiness" constantly remain IN the line of TIME, and the "object" of the MIND lies along the line "time" also.

Zeno—When a person seeks revenge for a past injury do you think that in such a case that happiness is the "pole" also?

Janus—"Revenge is sweet," it is said, and when one seeks it they fully expect to receive or gain "satisfaction," which is happiness, joy, pleasure and the attainment of these things lies IN THE FUTURE. And even when one gives away valuable services, money, or does another person a favor, it is because the anticipated joy to be derived from the giving and assisting of others is greater than the sordid happiness of withholding that inspires the gift.

Zeno—How then could you explain the hypnotic mind, which is subject to the will of another, and has no object of its own?

Janus—The "attention" of the hypnotic mind is FIXED upon the last impression which was made upon the brain, and consequently the hypnotic mind FACES THE PAST, and it has lost its "association of ideas" in which it was educated, and is therefore unable to distinguish between "truth" and falsehood. It is for this reason that the hypnotic is unable to judge of the truth, seeing that he has lost his "association of ideas," and hence the last thing which was impressed on his mind is to him the TRUTH, and immediately the "subconscious" mind current focuses in the direction of the "past," whilst a new "association of ideas" commences to assemble around the central TRUTH? The "subject" still possesses his brain, in which the records of his life is stored, but the NEW TRUTH must be sustained. If informed by the hypnotizer that he is a horse, he has no means of disproving the TRUTH because his "attention" has been suddenly withdrawn from his ordinary method of reasoning by comparing the new information with what he had previously learned by experience was the real relation held by himself to the rest of the world. But the NEW TRUTH sticks, and he must support it by acting like a horse and doing those things which he has records in his brain to prove that a horse usually did.

If informed that he is Shakespeare, he has no way to disprove the information, hence he MUST believe and act upon it. If he were so ignorant that he never heard of William Shakespeare, but knew another Shakespeare, he would instantly assume the character of the latter.

Diagrams Nos. 10 and 11 will give some idea of the relation which the mind of the "subject" and that of the operator hold to each other, and each of them to the "time measure."

The "special senses" of the subject are all "asleep" to everybody but the controller. The (brain-tent) focus within the brain has become "en rapport" with the outside focus (the "object"), which latter is the hypnotizing influence, person or thing which has succeeded in reversing the trend of thought from the future to the last impression made in the brain, and

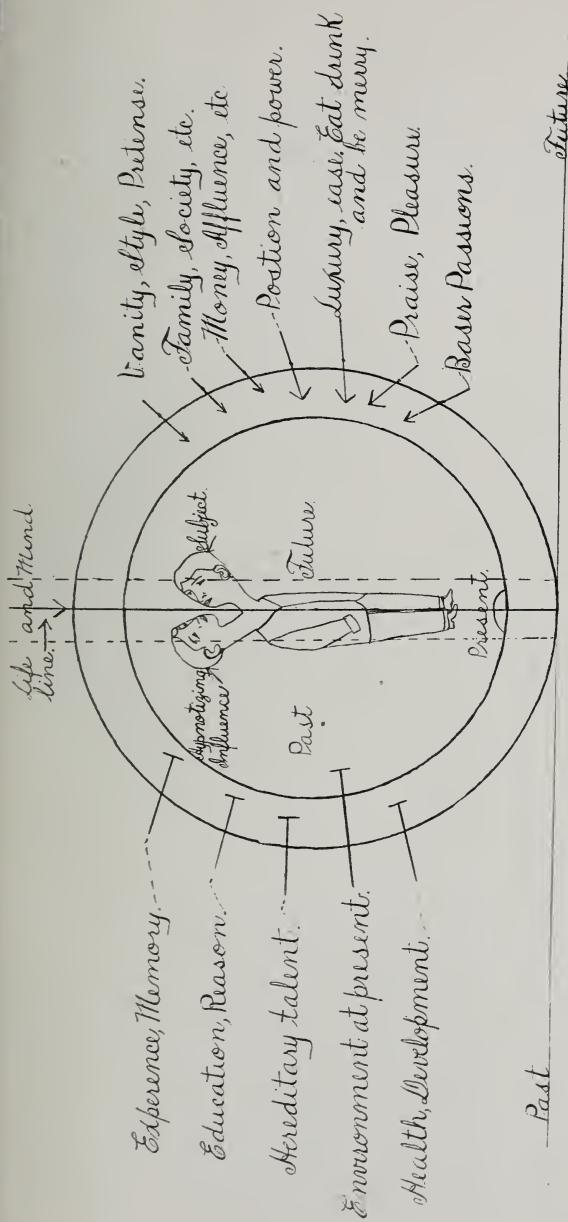
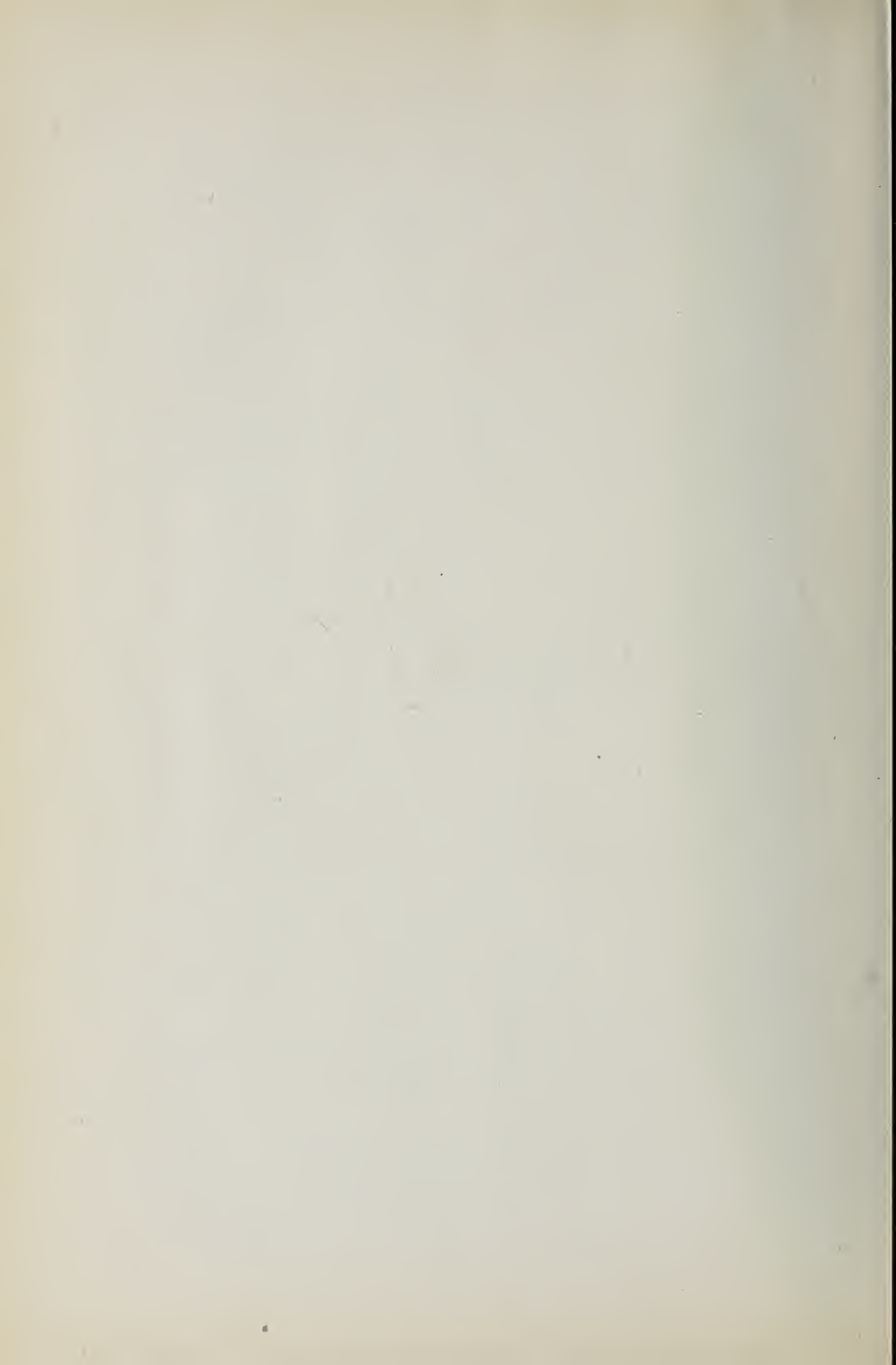


Diagram No. 10

The subject by having all his attention directed to the "Past" can accurately review all "Past" impressions and such now only as he receives from his "controller". These latter the subject accepts as true, seeing that he cannot use his ordinary reason as he is turned away from his objective bearings.



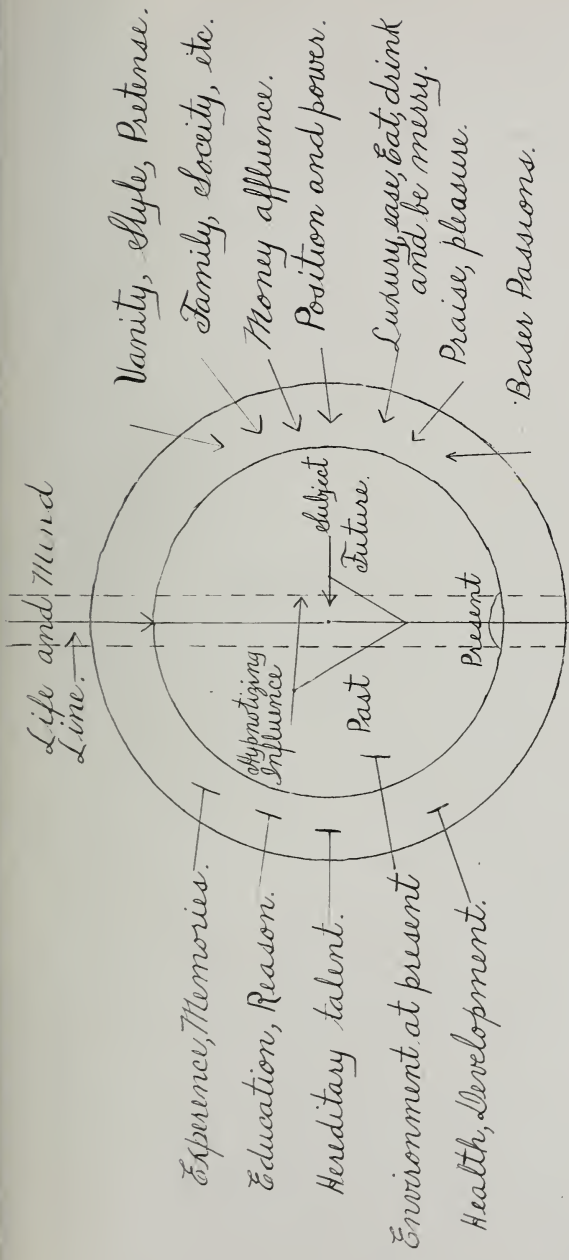


Diagram No. II

The subject by having all his attention directed to the "Past," can accurately review all past impressions and such new ones, only as he receives from his controller. These latter, the subject accepts as true, because he can not use his ordinary reason, as he is turned away from his objective bearing.





retaining the attention long enough for the "subconscious mind" to commence to form a "New association of ideas." If one could remain hypnotized they would develop what is called "dual mind," and it is quite easy to understand how it is that the subject, when in either of his two minds, knows nothing of the "other individual." And as in the case of the hypnotic subject when some sudden sound, or perhaps some injury, arrests his attention, in the same manner as it was arrested when he was placed in the hypnotic state, then the attention reverts to its OLD "association of ideas" on the future side and in which he was educated.

The "operator" sends an impulse into the brain by way of the hearing, generally when he wishes to "arouse" the subject. The "message" disturbs the BRAIN TENT focus, and the "subconscious" current once again naturally turns to the future side, and resumes its old association of ideas, and "Caesar is himself again."

Between the Two states there is a SKIP or break in the different "associations of ideas," and not until the subject is again hypnotized does he remember what happened when he was in the hypnosis previously.

It is very different with the Ecstatic, Diagram No. 12, because he gradually sinks back and away from the use of his "special senses" and when he comes to the "vertical present" he soars away into his "spirit land" and is not en rapport with any person's mind, to be misinformed and led away by "suggestions," but he is attracted by the calm, restful vibrations of the Primordial—in the present—where the focus of the "subconscious mind" soars and presents before the conception the ever evolving pictures derived from the "records" already implanted in his brain, undisturbed by "future plans and schemes," or worried by affairs of the past; for Ecstatics are never "business men," but have been students of the sublime and transcendental. When the Ecstatic gradually returns and recovers the use of his "special senses" he does not suffer a SKIP between the Two conditions, hence he can recount with great accuracy what his dream or vision was, and put it down in symbolic form and in script. His experience has appeared real and hence his statements ring with the assurance of conviction, and those who hear believe, and there is nothing that can convince the Ecstatic that he did not see the very things which he declares, and hear the words he heard.

Strange as it may seem, some people can acquire the power to place themselves in the ecstatic condition and still retain the use of their senses. Such persons also learn to exercise a most marvelous power of "healing" some kinds of sickness by bringing the patient into line with the Primordial vibrations and causing them to forget and relinquish the "influences" of forces which perverted their minds and subsequently their bodies also. Such persons have occasionally appeared in all ages of the world. It is not necessary that they should really understand the "modus operandi" of their

power, but there is no denying that they possessed the POWER to use the forces.

This is the secret of "mind reading," transference of thought, spectra, phantasms, mind healing, inspiration, interpretation of dreams, the mysteries of various theologies, and spiritistic phenomena, mediumship, alter egos, etc.

Consciousness is aroused by the activity, of a certain kind, in the brain. The ultimate elements of the brain cells move rapidly in concord with the vibrations of ether. The only way to reach "consciousness" is by way of the ether vibrations and the elements in the cells. Suspend or shut off the action of the "special senses" for a time, leave the BRAIN active, and the INNER focus still continues, and ether vibrations continue to receive the impress of the "elements," which contain the "records" of experience and events of life.

In such conditions consciousness perceives "the still small voice" and the gentle whisper produced by the same process as occurs in our regular every-day experience, only the etheric zephyrs are not disturbed by the usual stream of impulses from the "special senses."

The marvelous reports received in this fashion seem like voices or scenes from another world; "spirits" whisper, "controls" give directions, "guides" lead the way; "records" engraved in the brain of the "king" (much worried, and the worry being confined to "a memory," which is written in his brain) whose entire attention is withdrawn from the "future" schemes, or fears, from the result of past or bygone deeds. He sends for his Daniel, or a Joseph, who have never done anything in the past to be ashamed of, and even now have no prospects or hopes for future successes (in other words the interpreter lives only in the "present"). The king and Joseph meet. Both are strictly IN the "present vertical," the same current, attracted through the brain of the king went through Joseph's brain also, and, as they were en rapport, the cells in the brain of each vibrated in unison and excited "consciousness," not only in one brain but in both, and the king knew that the interpretation was correct, in just the same way that a hypnotic subject can remember what passed when he was formerly hypnotized, with this difference that the king, like Joseph, stood in the "vertical present." The hypnotic had his attention fastened to a "memory" unconnected with his regular "co-ordination of ideas," for you will remember that the sleeper and the Ecstatic went to sleep "facing the future," and, for the time, lost the connection, because the "special senses" failed to bring in the news, whilst the hypnotic was, by some artifice, turned away suddenly, and therefore there remains a SKIP in the movement of the needle of the compass—the attention—when the snap of the operator's fingers, or some other "suggestion" as suddenly arouses the hypnotic sleeper.

In both the "future side attractions" are for the time dropped; in each the "records" made in the brain by past experiences remain; in each the

This space represents the Past.

Mind tissue already woven.  
 Memories.  
 Knowledge.  
 Education.  
 Hereditary talent.  
 More Memories.

This space represents the Future.

Society, Family ties,  
 selfish interests.  
 Money attraction  
 Lust, passion, etc.  
 Popular approval.

Notice These attractions do  
 not attract the Ecstatio.

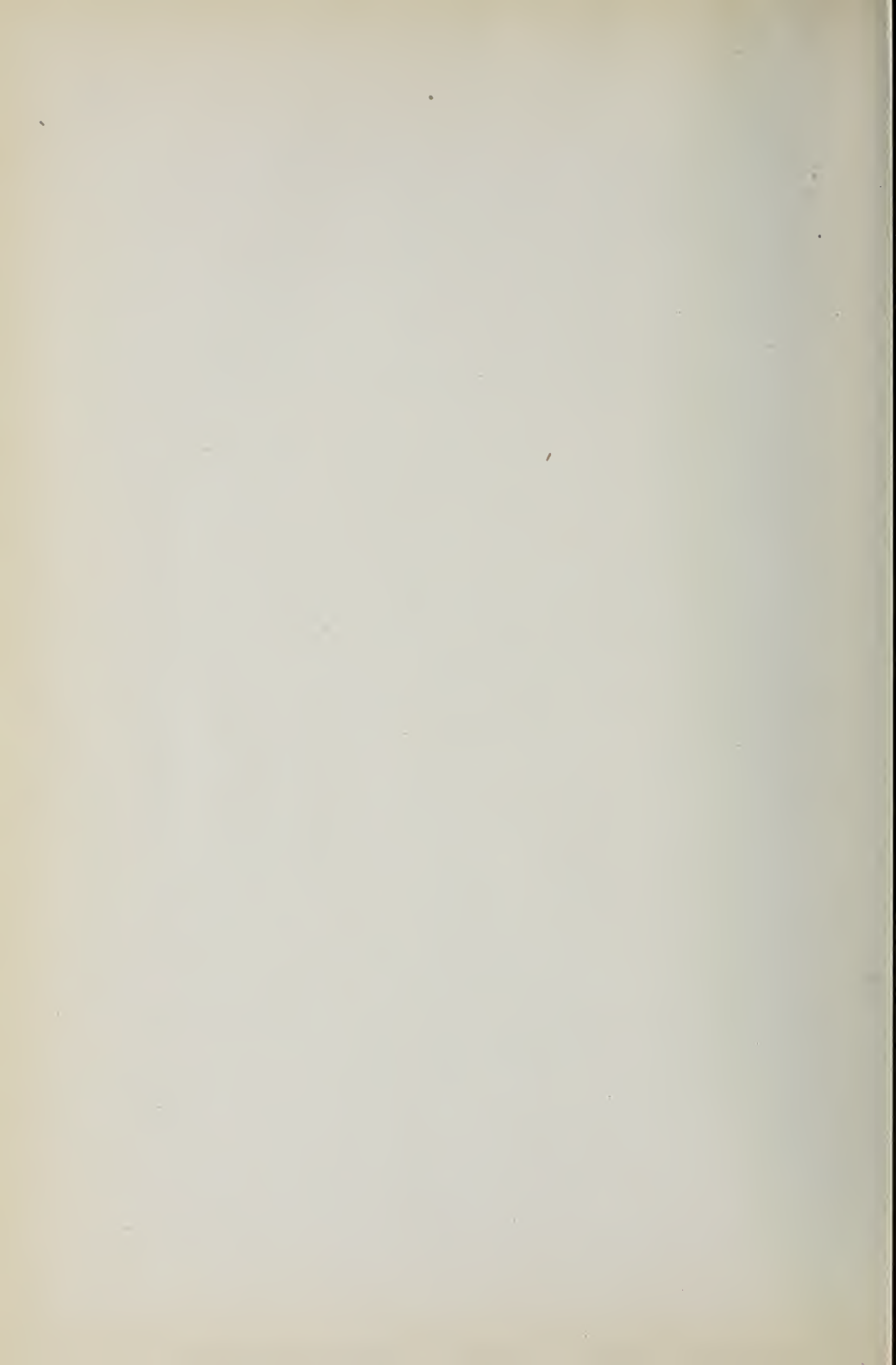
Past

Present

Future

Diagram No. 12

This trance-medium has centered his entire attention on the attraction in line with "Present". He sees and hears only those vibrations that comes from the Primordial mind, current, not interrupted, by any attractions from "Future", or disturbed by memories of the "Past". His mind vibrates in unison with Primordial mind waves, not even interrupted by impulses from passion, He is therefore purely emotional.



*This space represents past.*

*This space represents the future.*

*Life effort time.*



*Past*

*Present*

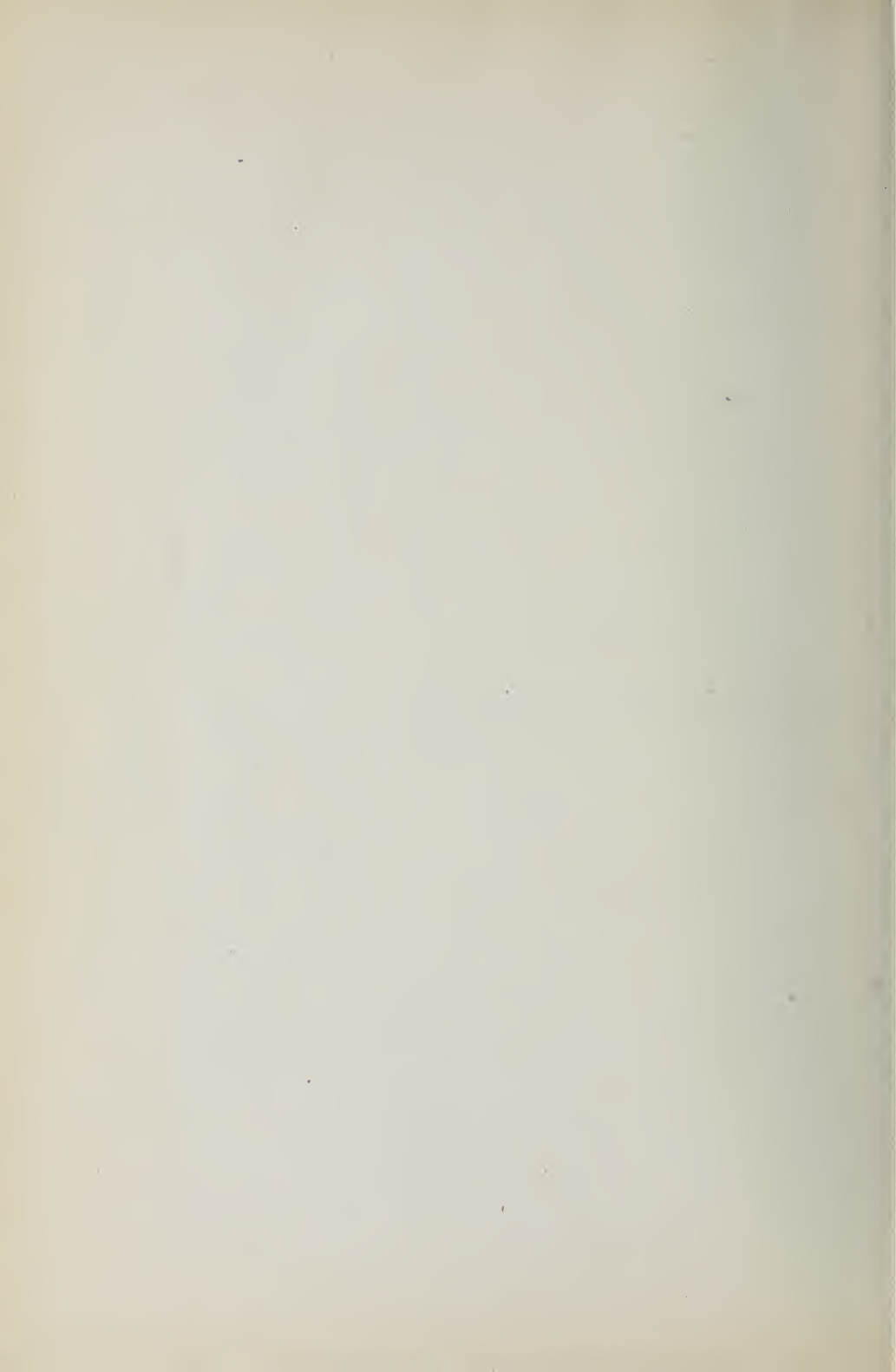
*Future*

*The stage in Hypnotism is called by East India Fakirs the 7<sup>th</sup>. degree, and the subject is liable not to return to his normal state, and death may ensue.*

Diagram No. 13

Hypno-Estatic.





primordial currents, unhampered by the "special sense" reports, are the same; in each it is a "memory record" which retains the attention; but the difference comes in, and is due to the manner in which the attention was fixed, and the relation which the "co-ordination of ideas" held to the impression which I called a "record" or "memory." In neither was there any "consciousness" when the "memory" was being reproduced from the brain.

The idea of "happiness" is one which grows with the "association of ideas," hence in the case of the hypnotic, since he loses for the time his "association of ideas," he experiences no happiness whatever except what is "suggested" to him by the hypnotizing influence and new associations of ideas, but in the case of the Ecstatic there is "great joy and gladness," ecstasy experienced as he bathes in the "river of life" and drinks from the "well of living water," joy so great that all other joys of life, which usually interest humans, fade away into insignificance and become a species of annoyance rather than pleasure to the "ardent worshiper" whose whole "soul" has been imbued with the power of the "great light" of the Primordial, which remains in the "Vertical PRESENT." From this source the ecclesiastic learns WHO it is that constitutes the "Beneficent Influence" that rules all things, and the scientist appreciates WHAT it is that supplies the force and power which affects matter wherever the latter is known to exist. This is the source of the "subconscious mind," or it is from this source that ONE branch of the mind of man is formed. It is the basis, or foundation, into which the impulses from the "special senses" and from the "organic" sources become engrafted to form the "objective mind," the "ecstatic mind," the "hypnotic mind," the "dream mind," the "unconscious mind," the "subliminal mind," and from it, as the vibrating energies of the ether undulations act and react upon matter, LIFE itself manifests, and when it acts upon and through the living human brain "instrument," it projects before the astonished vision the many appearances such as ghosts, spiritualistic spectra, lights of different kinds, sounds and voices, etc. The universe is like an infinite ocean, in the "present." When this great MIND storehouse of power is unbalanced in the room with the "strong medium," the same kind of vibrations which equally agitate the electrons and atoms in the table and in the brain causes the former to respond to impulses passing through the MEDIUM.

Bearing in mind the different directions in which the attention may point with reference to *time*, as portrayed in Diagram No. 4, TIME being the "horizontal" element of the ratio, "Energy" and matter are to TIME as the perpendicular is to the horizontal," and using the compass-shaped figure in Diagram No. 7 as an indicator for the divisions of the "surface" representing time, we will find no difficulty in constructing a number of ratios which will

assist us in remembering the differences and the relations between the phases of the mind. Thus—

(1.) The hypnotic mind is to the objective mind as the "past" is to the "future."

(2.) The hypnotic mind is to the ecstatic mind as the "past" is to the "present." Or by reversing these, we can say—

(3.) The objective mind is to the hypnotic mind as the "future" is to the "past," and—

(4.) The objective mind is to the ecstatic mind as the "future" is to the "present."

(5.) The ecstatic mind is to the objective mind as the "present" is to the "future."

(6.) The Ecstatic mind is to the Primordial mind as the living brain is to the "present."

NOTE.—In this last ratio the "living brain" represents the "records" which are in it; hence, as the "records" differ so also does the "vision" of the "ecstatic." And you may observe that all FOUR of the terms of the equation are confined to the "PRESENT VERTICAL."

Therefore the kind and phase of the mind depends upon the relation between the "brain-tent" focus and the "outside" focus.

With a finely developed brain the "brain-tent" focus will be proportionately better than in a poorly developed brain. The OUTSIDE focus might be regarded as the "attracting" agent, like we usually regard the north pole as an attraction for the electric needle, or we might regard the "outside" focus, as the place of meeting of the myriads of rays passing through the "brain-tent," but not necessarily as far away as the "object" of the thought, as previously explained.

A number of other different ratios may be constructed which will show the relation existing between the brain, and the phenomena perceived or the action performed, perhaps unconsciously, by the brain upon which the FORCES act.

The beautiful and systematic arrangement of the cells and tissues of the brain, with its ramifying convolutions, its deep sulci, symmetrically bilateral arrangement in clustered groups of cells, supported apparently on white fibres and bands, like branches on each side and across between the opposite sides—like an arborescent decoration upon its trunk—is not an arrangement made by accident, to fit neatly within its oval, flattened case, the skull; nor are the fluids which surround it and fill the irregular spaces in the interior merely exudations into its chambers and ventricles, useless in the production of mind.

Evolution has taken place in the brain, as in all other growths, from the plain and simple arrangement to the more complex, affording greatly increased utility for manifesting its powers, qualities, and performing its

particular function, viz., that of weaving and arranging the FORCES which gather together in it from everywhere; yet the increase in size of its different parts has been consistent with regard to the whole, and whatever functions are manifested are constantly associated with some corresponding development of some portion of the brain. Yet the qualities of the mind are not *caused* by the peculiarly developed part of the brain corresponding, not even when there is a difference between the development of the opposite sides of the brain, although in such cases there is physical foundation apparent for the mental peculiarities which are generally associated with deformity. The irregularity does not generate the different forces, but simply modifies them according to the physical construction of the "instrument."

MIND is not known apart from living beings, hence it would be impossible to describe it independently; therefore we should be familiar with the anatomy and physiology of living beings if we wish to know anything certain about the mind.

If the brain had evolved in form like a bladder, as its first appearance suggests, so that its cells were arranged inside the skull expanded in proportion to its number of mature cells, being filled with serum, it would be as large as a great tent resting upon its central stem. In such a "brain-tent" the variously developed regions could be studied with many advantages.

Great and finely developed regions appear in one brain and others not well developed, with scarcely a trace of cells in them. The centers corresponding to hearing, sight, speech, smell, etc., although represented in each, are distinctly different in each "brain-tent."

The general contour of the brain-tent would appear long and narrow, short and wide, oval or round, flat or arched, higher in front or behind, irregular with ridges more pronounced on one side than another, larger in front or very much contracted, but in all cases the "tent" would be wider transversely at the center than in front and somewhat egg-shaped, being irregularly flattened on the base.

If we view the face and features, we constantly observe all varieties in different individuals. The eyes may be large or small, projecting or retracted, sunk deeply into the socket, close together, or set widely apart, many different colors, and the iris in one is large, in another small, in one the eye slants up at the angle owing to the direction of the opening between the lids, in another the eye is narrow between the lids. The eye gives a great deal of information with reference to the character.

The ear may be large or small, thick or thin, heavily lobed—which may be attached or not—or there may be very small lobes. Some ears project; others sit closely to the head. One ear often differs in shape from the opposite, and may be set up higher, and many other variations may be seen. From the ear much information concerning the character of the individual may be acquired.



The nose may be long or short, thick, rounded and club-shaped, or it may be narrow, sharp and retroussé; wide or narrow nostrils; straight, crooked, hollow or convex, deeply notched where it joins with the forehead, or it may be straight with the forehead, pendant or pug, and the septum may be crooked, bent to one side, or straight.

The forehead may be retracted, or have any angle with the vertical, and sometimes it comes forward past the vertical. It is wide, narrow, high, low, hairy or clear, ridged or smooth and round. Much information may be obtained by studying the forehead concerning the character.

The neck also varies in its shape, being thick and short, long and thin, very muscular, or very weak and bony. It may be long and arched or set deeply between the shoulders.

The outline of the face varies as well as its color, and many people learn to read the character from the face and features like a book. Criminology as a science pays very great attention to these differences in order to obtain knowledge to what particular class different criminals belong.

Since the firmer tissues present so much difference and are so important with reference to the mind, how much more must the soft and fragile tissues the brain possesses, and what latitude for variation in development must they furnish!

Zeno—But it is impossible to observe any such variation in the brain as it is encased in the skull, and to examine the brain after death would not be of service in giving any information as to the character of the individual.

Janus—That is very true, except that by observing the very great difference between different brains as to the amount of grey matter, which, when abundant, shows many deep sulci and corrugations or convolutions—to note the relative size and development in general and of certain regions—and to compare opposite sides of the same brain, in which there is nearly always considerable variation in the length and direction of the fissures and convolutions, and, when the skull is irregularly formed, to notice that the brain conforms to the inside of the skull in outline. There is also much difference in different races of people, and since we know that the development of the brain is the chief center of physical evolution, which corresponds with evolution of the mind, we can compare living and dead brains. According as there is increase in size upward and forward there is a correspondingly increased manifestation of intelligence all the way up through the ape, the human idiot, the bushman, uncultivated, improved, civilized, enlightened, up to the highest type, viz., the Caucasian.

There is no doubt also that there are wide differences between the cells of the brain on opposite sides because the infinite variety observed in the general outline must be associated with corresponding growth and development of the cells, because the brain is fabricated from cells.



In our "brain-tent," if the impulses from the "organs" and the "special senses" entered like rays of light and shining in from all directions, it is evident that the entire group would tend to "focus" in or near the center of the "brain-tent." This, we know, from the nature of the action of lens-shaped bodies upon rays passing into and through them.

Accordingly, also, if the opposite sides of the "brain-tent" were not alike, or if irregularly shaped and disproportioned, the "focus" would deviate from the center, or be imperfect, something like the foci of different kinds made by light rays entering defective eyes; one is astigmatic, another myopic, another is strabismic, presbyoptic, etc., with all degrees of imperfection, and differing in opposite eyes.

Thus we may have "mental strabismus, myopia, astigmatism, etc. Some can only understand what is away in the future, which is always conditional. Such persons are visionary, impractical, optimistic, full of idealities which seldom materialize. Others are very short-sighted with reference to business affairs, and are often pessimists; others seem to dilly-dally along with little or no interest in anything. Much depends upon the evenness in the development of both sides of the brain.

But the chief object in the erection of our "brain-tent" is that we may obtain a very good conception of how the greater development in one or more locations is associated with different "talents," and how it is possible to understand why characters differ, and how one may exhibit a great difference in his "disposition" at different times—how, under certain influences, a person has one kind of a character, and under other influences an entirely different character.

Zeno—I fail to see how you can "focus" the impulses which compose MIND without having something to focus them upon. In the eye there is the retina, but in the "brain-tent" there is only serum, and of course I understand that the "serum" is like that in the ordinary brain, being alive with etheric vibrations throughout; but the "focused" impulses or rays should have some tissue upon which they can focus.

Janus—You are right, and the focus should be somewhere near the center of the brain-tent, and in the median line; it need not be a point in a large organ like the human brain, but it should be free to respond to the vibrations coming from all sides, even if the vibrations travel in the fluids of the brain.

There is the small cone-shaped body, the Pineal gland, which stands out between the anterior bodies of the corpora quadrigemina in the fourth ventricle and it is bathed in the serum of the ventricle. It used to be called "the seat of the soul" by some anatomists, but its function is not known. For convenience we will erect a rostrum in the center of the "brain-tent" and seat Mr. Ego (consciousness) upon it.

To the Ego the entire interior of the tent would appear as an immense painting, whereon Experience, the artist, works assiduously, recording impres-

sions in the interior of the brain cells and securing more and better material to extend his artistic productions, which he arranges upon the living canvas. The twenty or thirty billions of blood corpuscles bring him freshly prepared materials and carry off what he does not use. His skill is greatly enhanced by the work of other artists who thus serve the part of tutors.

The success of his labor depends greatly upon the quality of the “canvas,” which is derived from heredity, and it is best preserved when kept free from taints of disease, drugs, toxins, etc., and supplied with just the proper kind of “nourishment” and kept purified from all collections of dross and fumes of tobacco and alcohol, etc. This ideal condition he calls “health.”

There is an individual artist (experience) in each and every brain while it lives, and his work is very different, partly because his energy is all expended in painting different regions of the “canvas” in different persons, and because his “attention” is directed to certain locations in the great field upon which he labors, causing him to neglect the other parts of the painting. He may delicately arrange and rearrange the records connected with “sounds,” “sights,” “speech,” “touch,” etc., or he may develop those which are directly connected with “organic” functioning, and again he may labor night and day to arrange the impressions which guide him to come to correct conclusions, or reason. This he does by arranging “facts” in accurate rows, so that when certain data are given him he lets the ether currents focus to certain points (conclusions) just according to the data given for consideration. In another, he fixes firmly certain facts which serve as historic landmarks, and he assiduously hangs others around and about the central “pegs.” In this manner slight changes in the appearance of the “canvas” are produced, and these are propagated to the offspring sometimes, and thus evolution develops the brain-tent and the races cross and intermarry. It may be that the material furnished him is better adapted to one region than another, and he accordingly uses up what gives him the best, clearest and most enduring picture.

The results of the artist’s labors are associated with all the different kinds of minds known in the world. In one the result is a daub, in another a most beautiful production, artistically decorated. Still it is not due either to the “canvas” or the “brain-tent” nor to “Experience,” that the MIND manifests. The “canvas” is the “Machine,” and “Experience” is the mechanic who made the machine, which differs for each person.

Let the three kinds of forces assemble to the “brain-tent,” as they do in ordinary life, and we will recognize that the mind varies according as the “machine” varies, but still it is caused by the “forces” themselves.

The Primordial vibrations give foundation or basis for the “organic,” and for the “special sense” impulses which meet and mingle with the Primordial.

If from any cause there exists a difference between the opposite sides of

the brain, it is evident that the "rays" which assemble into the "tent" would not and could not "focus" at the same point, and the focus would be comparable to that of a defective eye. What is true of any one pair of brain centers is equally true of each pair, and all of them.

Hence the streams of vibrations coming into the brain and agitating the ether in the "tent," and bringing "information" from various sources, are necessarily associated with the imperfections of the "instrument" of the mind, if such exist. If there should be thickening, or blurring in any part of the "canvas" there would necessarily be a defect in the "rays" entering through that part. Hence, any injury, growth or pathological infarction will be associated with mental deficiency, permanent delusions, monomania, delusional insanity, hallucination, etc., depending upon the location and extent of the lesion. When the tissues become saturated with certain abnormal products the perception becomes blurred, and from such source melancholia, paranoia, intoxication and perhaps emotional insanity originate, according to the nature of the intoxicant and the particular region of the tissues most deeply saturated with the foreign substance. In fact we might even say that the currents become "short circuited," so fail to reach and properly excite the very remarkable thing called consciousness.

In short, there is no mental disease where there is no corresponding physical defect. Hence, when the body and brain are perfectly healthy, clear and sound, mental disease is impossible; and if the cause of the mental deviation can be removed, the mind is sound or healthy.

When the brain becomes overloaded with katabolic products the currents fail to "focus," and hence a condition of unconsciousness ensues, and this is generally called "sleep." After some hours the effete products, having been absorbed and removed from interference, the waking is easy, because once more the currents can readily pass to the focal center of the brain. Sounds, light, odors, feelings are then readily conveyed, and when their impulses meet and mingle with similar kinds of vibrations from the opposite side of the brain, the result is "waking."

Upon the same system the phenomena of "dreams" can be readily explained. The *brain centers*, being arranged in pairs, are more intimately related, or respond more readily to the same stimulus or set of vibrations, than other pairs of centers. Hence one pair of centers may be "awake" whilst the others are all asleep. In the case of somnambulism the locomotion centers, not being exhausted, are "awake," whilst the centers of hearing, sight, etc., are asleep. Similarly, one talks, laughs, whistles, sings during profound sleep of the centers of sight, locomotion, smell, taste, etc.

Now although during sleep the impulses entering the brain by way of the special senses do not succeed in arousing consciousness, nevertheless there is a variable percentage of the force of the impulses succeeds in reaching and making proportionate impression upon the "subconscious" mental cur-



rent, and, accordingly, the subconscious mind is impressed with sensations which arrive from any of the different senses. Hunger, thirst, suffocation and any impulse arising from the "organic" will influence the "dream" just as readily as impulses arising outside of the organism. The special senses are like sentinels, to warn off danger while we sleep and bring us information when awake.

When febrile toxins poison the blood and nerve centers, delirium, coma, and irregular twitchings mark the "organic" impulses. When there is great activity and excitement of certain centers, mania, hysteria, etc., apparently originate in the MIND, but such manifestations are always associated with inordinate action of some of the organs which send perverted impulses.

Our minds are momentarily depending, not only upon the perfection and nature of the "instrument," but upon the supply of energies which gather at the brain to produce it.

I warn you again to remember that the brain itself is so constructed that it retains impressions which have been made upon it, and these impressions constitute the "records" of the mind, which, like stumps and irregularities in the course of a flood, turn or modify the current of the mind; and as each "record" remains after being made it becomes a new modifier of the future dictates of the mind.

So important a part is played by these "records" that one is led sometimes to believe that the mind originates IN the brain, and you will frequently hear of "brain power" as if the mind forces originated in the brain, whilst in reality the forces originate and assemble in the brain of the cleverest man in the same way as they do in a mollycoddle and the dotard.

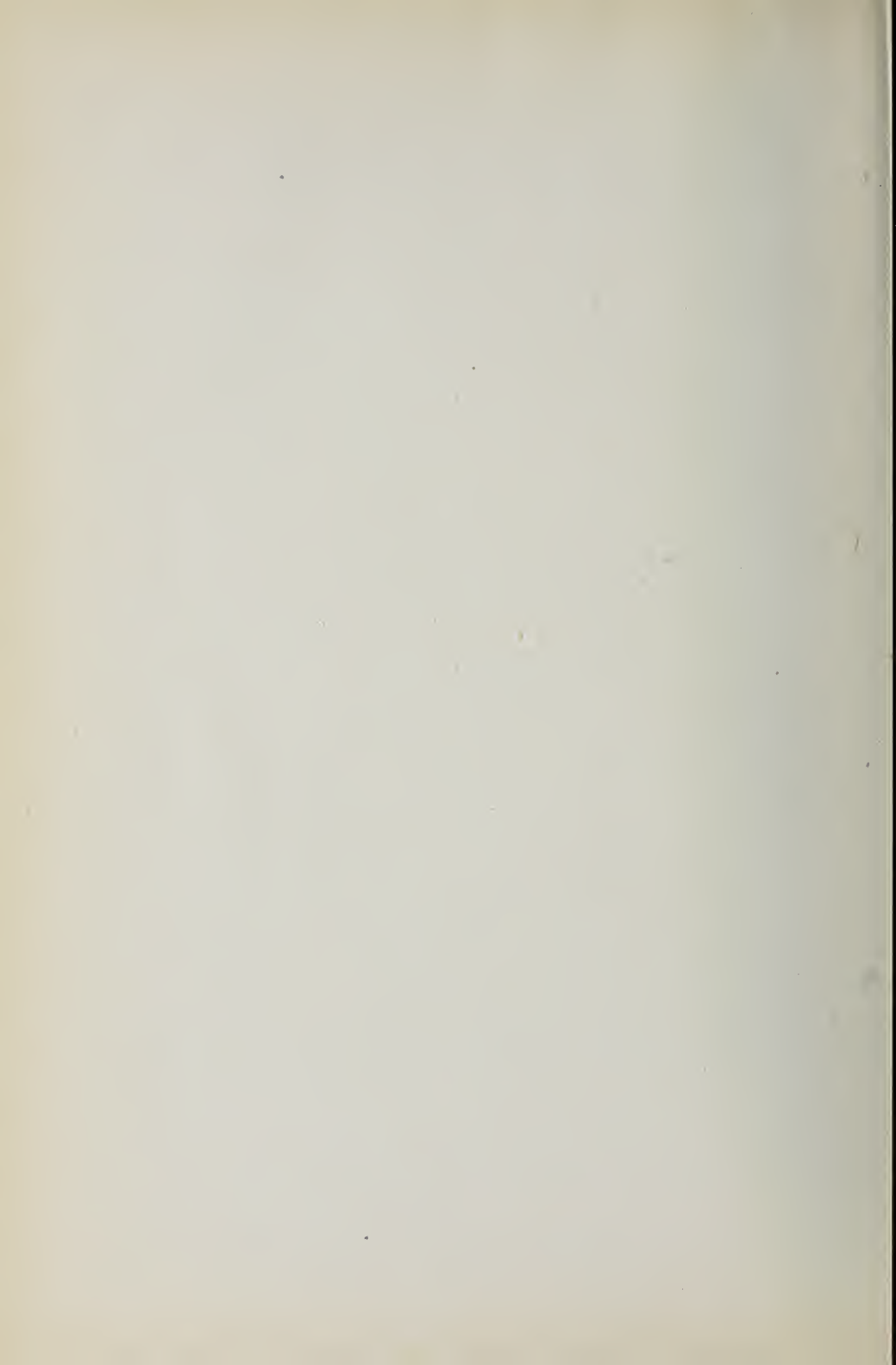
The character of any person thus can be understood to vary just as there is a greater or less degree of impression made upon the "conscious center" by means of impulses which arrive by any one particular route, and hence at one time an individual may be sensual when swayed by "carnal" impulses, and "intelligent" when the impulses come through a brain well stored with records or "memories" of great things and when fired with zeal to attain something useful to self or others. When the brain becomes befogged with drinks or certain drugs, the formerly gentle, generous, kind husband may become rough, mean, rude and overbearing; but there are all shades and gradations of character manifested according to the drink, the drug, the brain development, the physical or organic development and age, so that it would be useless to attempt to classify them. But no matter how various the mental manifestations may be, they can be readily understood by keeping in mind the three sources of the forces and remembering the peculiarity of the brain in that it "records" IMPULSES and these continue to modify the "current of thought" as long as they continue.

There are no two minds exactly alike, because the "instrument" is constructed somewhat differently in its general formation and in its individual

organs. The environments of one person are not the same as those of another, and since the brain records the experiences which we receive from our environments, the brains must always differ accordingly. Age, health, sex and a thousand things continue to modify the body and accordingly the mind, but in all cases the mind is the RESULTANT force.

If we could stand upon the rostrum in the "brain-tent," and were able to see and read the story of a life, with its volumes of records and paintings of experience enrolled in "memories" amidst the ever revolving myriads and multitudes of hosts of whirling systems of atoms and electrons within the cells of the brain, under the eye of consciousness, surrounded by billions of myriads of other correlated and concurring scenes that never aroused consciousness nor attracted attention at all, we would be embarked within a mystic labyrinth a million times more hazy than those of Hampton Court or Versailles. Avenues of frescoed landscapes, many of which were never previously observed, decorating curving views that would astound our vision; and even whilst we gaze, still fresh and recent graded alterations, like a phantasmagoria, would enrich our view, whilst far beyond these new vistas still arise, in turn to fade away as still further and other attractions of an entirely different kind enslave us. Chords of rapturous rhythmical strains of music burst upon us from symphonies, vocal or orchestral, enchanting our very souls, decoying our paltry consciousness to ecstasy. Again we turn where scenes of sorrow, imposed by vicious "self" trampling over human rights, leave but a doleful path behind, down which the widow with her helpless children struggle for very life, whilst wanton extravagance, concupiscence and robbery strut and glory in the path of fame, with ease and luxury catering to debauch. Fascination, enchantment, maze, alternate with horror, disgust and resentment, mingling with desire for revenge. Thus varying scenes and sounds and cerebral records become revealed as they remain enshrined within the cells of the brain, sculptured in atomic and electronic worlds by Nature's Esthete, all in perfect order and perfect symmetry, until at last we shrink aghast amidst emotions of admiration and reverence, exhaustion supervenes, and long ere we have reached the space beyond the antechamber, oblivion draws the shade, to rise again for many times, as curiosity and remembrance stimulate desire we oft arise from slumber. Age creeps on at last, as yet fresh correlated records roll, till grievous destruction of our own brain cells blots out both consciousness and scenery.





## CHAPTER 5.

THE MIND, AND HOW IT IS CONNECTED WITH THE BODY, AND WHERE ITS THREE CLASSES OF QUALITIES COME FROM.

Notes by Zeno—

Zeno—I cannot yet see any great advantage to be gained by regarding mind as a FORCE derived from THREE different sources; because no one knows what a “force” is, except by its effects upon matter; and if the nature of the mind changes accordingly as the “instrument” of the mind changes, we might just as well commence the study of the MIND at the instrument as anywhere else. If any one would rather BELIEVE that the mind is all outside of the instrument, and that the peculiar kind of mind which any individual manifests is due to his breeding, education, development, training, etc., and other people BELIEVE that the mind originates from the functioning of the body, it would make no difference to the MIND itself, as an entity, which manifests certain qualities, faculties, powers, etc.

Janus—The results derived from “belief” in one or other of these two theories are widely different, and very great indeed; and if both of them are wrong it is evident that we cannot make positive advancement in the study of the phenomena and phases of the mind, because we are sure to attribute what facts, phenomena and phases, which we know do manifest, to one of the two different causes. Nor can we remain neutral in the matter, since we know that the world is torn with dissensions concerning these very wide spreading results, and therefore to be acquainted with the very root of the evil becomes of paramount importance.

To believe that the earth turns the entire heavens, or that they turn themselves once around the earth daily would make no difference as to the phenomena of day or night, but since neither of them is correct, it became of much importance to ascertain our real relation with the other parts of the universe, for otherwise we must remain in ignorance of the real nature of the forces which act upon and control the earth, but by knowing something of these we have better opportunity to learn concerning ourselves, and how we can perform our share of the functions of the life.

Possibly it might be better to remain neutral in the matter than to be led astray with erroneous “beliefs,” seeing that we could live and enjoy the pleasures of life and thrive much better than any other kind of animals, and it is certain that none of the lower animals either know or care anything about whether the earth turns or not, and some of them enjoy life very well.

The belief that the MIND is all outside of us, and that the mind, spirit

or soul which actuates the individual was originally "breathed" into us by the Creator, and that there is at least one soul or spirit in each person, leads to various kinds of religion, and even superstition; because, since the soul, or spirit, "never dies," or is immortal, it becomes necessary that a place be provided in which the soul or spirit resides permanently, and in which perfect joy or happiness is ensured for the good, and another place to receive the bad or wicked, where they will receive punishment.

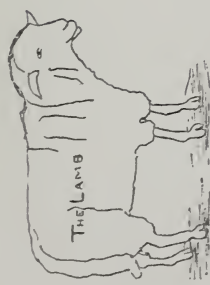
It leads also to disputation regarding the nature, qualities, powers and attributes of the OUTSIDE mind, hence the Jew differs from the Buddhist, the Christian from the Mohammedan, etc., and it becomes impossible to settle the differences between them, because the OUTSIDE mind is BELIEVED by each denomination to possess different kinds of "perfection" and to be possessed of certain attributes, qualities and dispositions which favor the believers' conceptions. Hence the different systems of worship develop, and as there is no scientific way by which the various beliefs can be established or be proven erroneous, the number of "beliefs" increases, and the divisions between the factions continue to widen, until sociable relations, real friendship and even confidence become limited to certain circles and classes. In time jealousy and hatred lead to disputations, conflicts and wars, which periodically drench the earth with blood, destroying the weaker nation and establishing, for a time, the more powerful nation, whose authority and dominion have been won by the sword, without regard for the "belief" which was the original or fundamental cause of the segregation into classes. Militarism and dictatorship become necessary to prevent entire destruction, and as the devastating wars destroy millions of the better classes and thousands of the finest institutions of learning, impoverishing the country and the people are driven to the necessity of simply obtaining food and shelter. Ages roll by before the original great advancement reappears.

Again, if the MIND be traced to the "instrument" only, the result is that the OUTSIDE "Beneficent" Influence becomes neglected, and, in course of time, forgotten, or even ridiculed, because the wonderful thing called MIND is BELIEVED to depend entirely upon the state and condition of the "instrument." Such a belief, endorsed by scientific experimenting, leads to MATERIALISM, and ATHEISM, and fosters EGOISM, COMMERCIALISM, and in the course of time the MONEY POWER develops into a hideous monster, as is graphically depicted in one of the visions of St. John the Divine, to be read in the 16th chapter of Revelation. See Diagram No. 14.

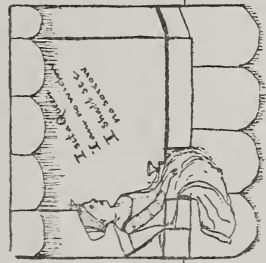
But when we recognize that the MIND is a FORCE, derived from THREE different sources, we will have no difficulty in perceiving where the division between the Two great classes had its real origin,—and it is evident that the divergence of opinions must have occurred in or near the root of the TREE of life and of knowledge, else it would be readily recognized and remedied. Both LIFE and MIND unfold like a TREE, and every man is in the CENTER of

# Diagram 14.

The Vision of St John  
(Revelation Chapter 17)



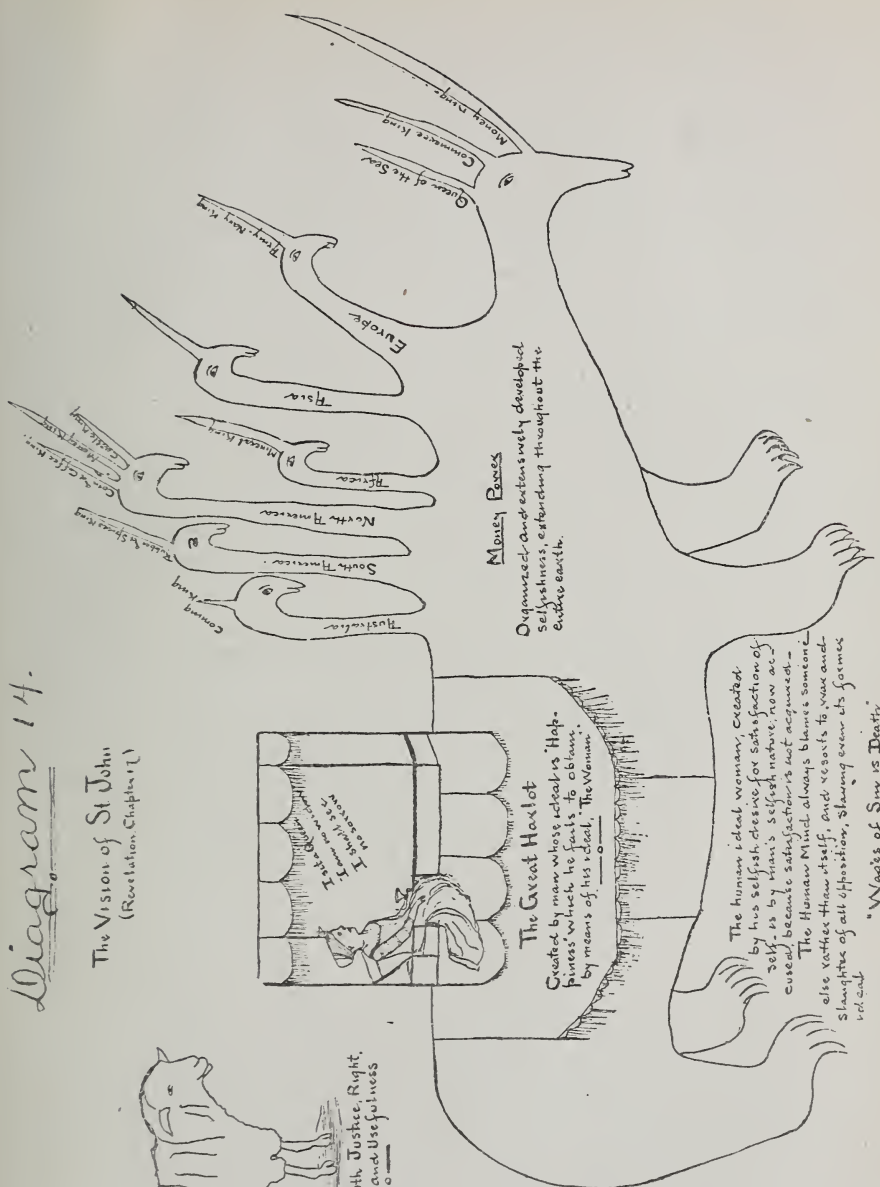
Represents Truth, Justice, Right,  
Virtue, Honor and Usefulness



The Great Harlot

Created by man whose ideal is 'Happiness' which he seeks to obtain by means of his ideal, 'The Woman'.

The woman in the sketch represents the great City where ruling power is centered and was at one time in Babylon



Money Power  
Organized and extensively developed selfishness, extending throughout the entire earth.

The human ideal woman, created by his selfish desire for satisfaction of self, is by man's selfish nature, now accused, became satisfaction is not accused -

The Human Mind always blames someone else, rather than itself, and resorts to war and slaughter of all opposition, blaming even its former victim

"Wages of Sin is Death"

Right, Justice and Truth, will conquer, overthrow and finally govern the World





the GARDEN of the world. The nature of the "tree of LIFE" has been established by Biology and Evolution; but dissensions arising from BELIEFS have aborted the development of the "tree of knowledge." Knowledge is obtained by the MIND,—therefore it becomes of extreme importance to know what the mind is, and its sources, and mode of growth.

If we can prove the truth of the COMPOSITION of the mind, then it would not be necessary to BELIEVE it, because KNOWLEDGE dispels the necessity for "belief." Belief implies confidence in something which has not been proven. As soon as anything has been proven or demonstrated, it passes out of the realm of "belief," because it is KNOWLEDGE, which is the light which dispels the necessary darkness, or ignorance associated with BELIEF.

It is an easy matter to demonstrate how that the MIND is changed by the condition and state of the "organism," the body, in any one of a thousand different ways. (1) Give a man some drug, such as morphine, atropine, canibus indicus, etc., and the mind becomes different from normal, and manifests characteristics of a different character in each case; because the drug is absorbed and enters into the very composition of the brain cells, and by its presence modifies the composition and functioning of the cells. The effect is "organic."

(2) Blindfold a man, bring him into a room or elsewhere, turn him around once or twice, he cannot know, by means of his eyesight, in which direction he faces, or what is the relation of surrounding objects. The mind of the blind is evidently not the same as the mind of the person with good eyes. The same is true concerning the knowledge derived from any of the "special senses." The mind is varied by means of the information derived by way of the special senses.

When one is asleep, it is the special senses which are asleep. The stream of information which keeps coming into the brain, while we are awake, changes the nature of the mind constantly.

(3) When ether vibrations from our sun (white light) are passed through a prism, the result is that the "white light" is resolved into "colors"—the prism is a "dead" instrument. When ether vibrations enter and pass through the LIVING BRAIN, they are resolved into ATTRIBUTES; these attributes really belong to the forces IN the ether, in the same way as the "colors" are inherent IN the white light—the colors are mental impressions which only reach the individual brain, but the "attributes" are the product after passing through it, and form the basis of MIND—kindness, love, affection, sympathy, benevolence, friendship, veneration, charity, humility, devotion, and kindred qualities, such as extend between persons, not being confined to SELF, but concerned solely for the benefit or good of another, are some of the MIND qualities derived from the Primordial ether vibrations.

Many learned men have devoted years of persistent study, experimenting.

labor, and have expended much money, attempting to prove that the mind is derived from the "organic functioning."

The experimenting has proved that there is a somewhat definite relation existing between certain excitants applied and the response made in the mental manifestation,—apparently showing that the result comes from the action of the organ itself.

Professor Fleshzig, of Germany, describes FOUR great THOUGHT centers in the brain,—and FOUR great SENSE centers also. In these so-called centers, a great number of highly developed brain cells are found, and this is especially true in the human brain, which is the most capable brain of all.

Professor Fleshzig's classes are as follows:

*SENSE centers.* (1) The TOUCH center in the Vertical lobe; (2) The HEARING CENTER in the temporal lobe; (3) The SIGHT center in the occipital lobe; (4) The SMELL center in the central lobe.

*THOUGHT centers.* (1) The frontal center of association; (2) The parietal center of association; (3) The great occiput center; (4) The insular brain center, the Island of RIEL.

Now, there are Two sides to the brain, and these CENTERS, described by Fleshzig, as existing in the brain, are double—one on each side—and they are separated considerably from one another on the same side; but as there is only ONE *brain*, and ONE *mind*, and one *consciousness* in each person, it must follow that the "conscious" center (if there is such a point) must fluctuate very rapidly, for it is calculated that we can THINK of about 100 different things in one SECOND. Moreover, when we are conscious, the five special senses are all awake, and on the alert, so much so that even if our attention is not directed to each we can remember what a thing looked like, at the same instant in which there is a sound perceived, and at the same instant we perceived an odor or felt a pain, and each of them can be "remembered."

When a small portion of the brain, away at the most distant point from any of these "centers," is removed, or injured, we become unconscious, and cannot "think" at all, nor either remember or reason,—both "thought" and "sense" are absent.

If Fleshzig's centers of thought and sense act separately (there being only one consciousness), a "thought" must have Two subjective ends to it, because both sides of the brain are necessary in order to "think."

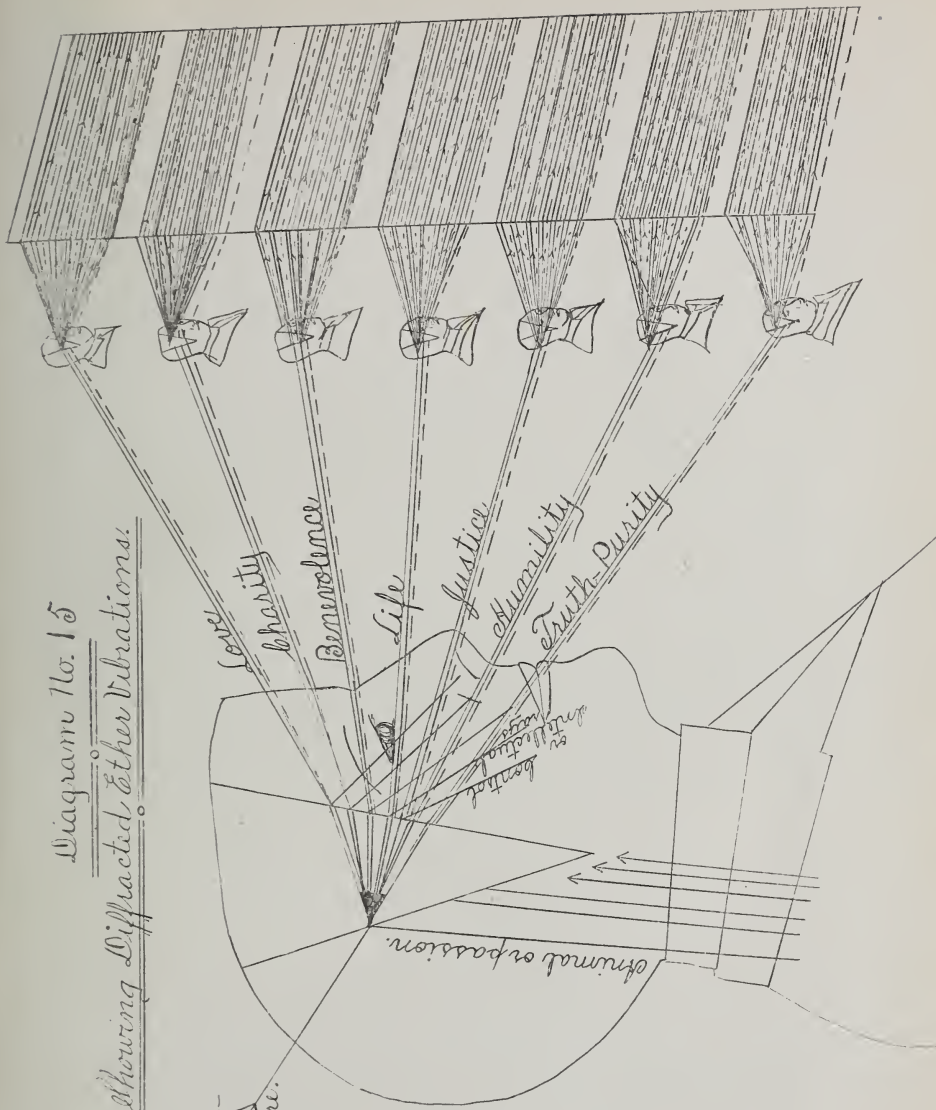
However, the kind and quality of a "thought" does depend upon the kind and quality of the "instrument" of the mind, in the same way as the product of any machine depends upon the kind and quality of the machine through which the product becomes manifest. Modify, or change the machine, and the product is changed,—but the force which operates the machine does not come from it; neither do the forces which operate the brain and produce the MIND come from the functioning of the "machine" (the brain).

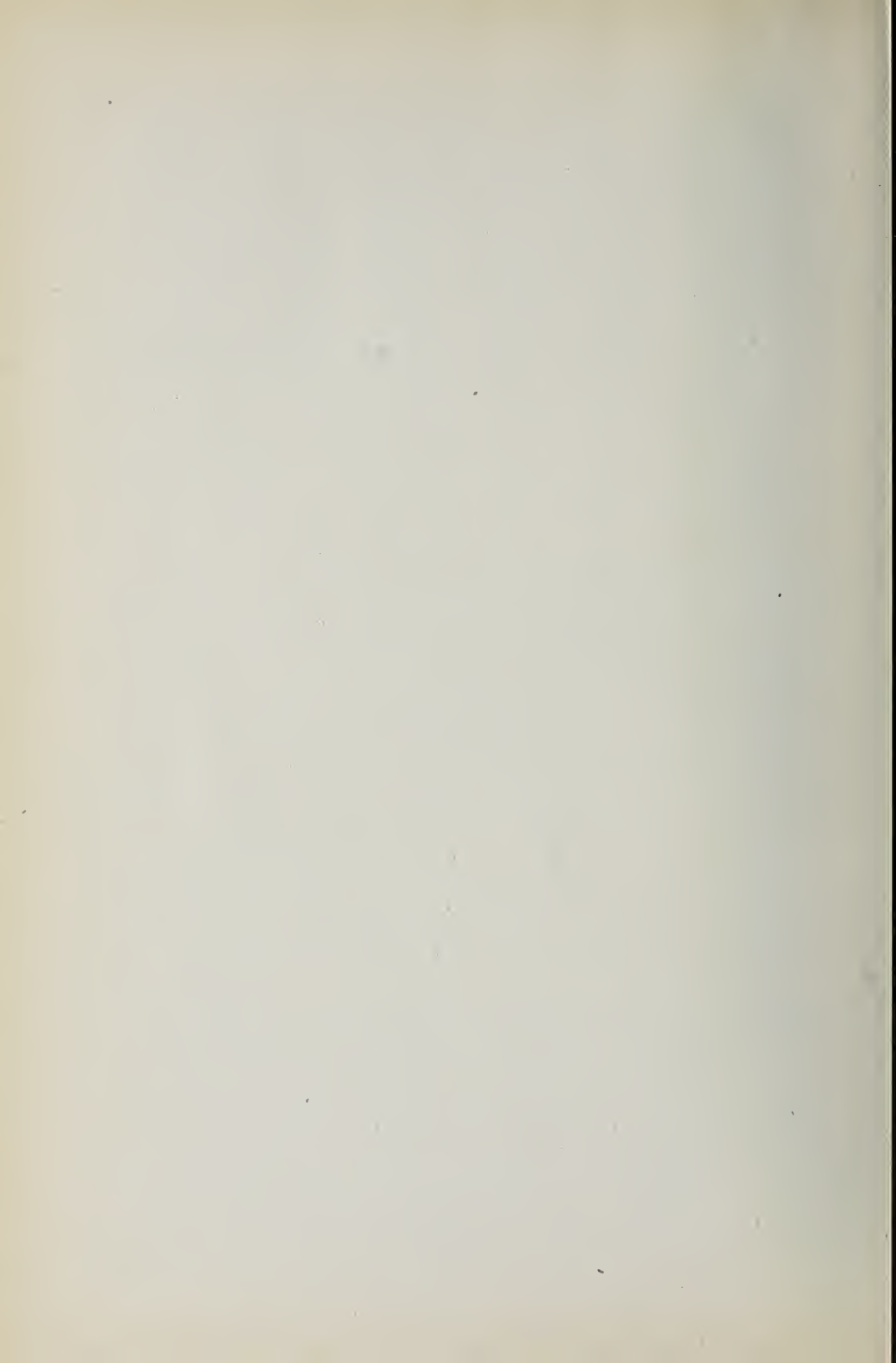
Diagram No. 15

Showing Diffracted Ether Vibrations.



creative rays-  
source of all  
things that are.







Those who teach that the MIND is independent of the body, are very liable to completely overlook the set of impulses which originate in the functioning of the "organs" of the body, and erroneously attribute the qualities, powers, phases, and peculiarities wholly to the "outside" mind,—and to attribute the "good" qualities to one source (the Deity), and the "bad" qualities to another source (the evil spirit).

Psychology in all its branches is the study of the mind and human soul; the phenomena of consciousness; and the nature and relations of one faculty to another. It is divided into branches, such as metaphysics, psychophysics, moral and intellectual psychology, transcendentalism, inductive psychology, and so on. Phrenologists study only the skull. In short, psychology is a science which teaches what is actually known or may be learned concerning the SOUL, as may be derived from observation, accompanied with definitions, terminology, classified arrangement, and rational explanations.

In all of these studies there is an assumption that a soul exists in each person, or that there is a mind more or less independent of the body.

Between what can be demonstrated to be true from the physiology of the different organs of the body, and the deductions by reason, as to what are the relations between the body and the mind, these different branches of science are built up.

Zeno—But so far as the MIND is concerned, and the study thereof, it appears to me if we would attribute everything to the "instrument" it would be more convenient, for we could blame the "instrument" for any defect or deficiency manifested in the mental qualities, and still we could regard the existence of the "outside" mind just as well as we can by dividing up the origin of mind into THREE sources.

Janus—The plan you suggest, of blaming the instrument for the defects or deficiencies of the mind qualities, would necessitate the giving of credit to the "instrument" for all the good qualities as well; hence we would arrive at the same result as physiologists do by attributing all mental qualities to the functioning of the organs. In doing so we would dispense with the forces which we know come from the "outside," and even if a teacher knew that part of the mind force does come from the outside, and if he taught that the mind commenced in the body, or that it is only traceable to the body, his pupils would necessarily be guided by his teaching, and they could not attain the truth by learning and believing what they were taught.

Besides that, such a teacher could not be just with himself, hence his teaching would lack the ring of conviction on his own part, and his own mind would soon become biased, because he would require to defend his own teachings.

Such a system as you suggest implies a standard of perfection for the mind. That being the case, we would require to agree upon what perfection consists in, and what are its qualities; but you know that we cannot



QUALIFY perfection,—hence we become launched into the same difficulty as faces the Buddhist, the Jew, the Mohammedan, the Mystic, the Theosophist, and the Christian.

It is the difference in the conception of what PERFECTION is that constitutes one great source of dispute, causing classes and creeds to form. And there is no way by which the difference of "opinion" can be settled, because what one believes and considers good, another does not believe or he considers evil, or even despises. Belief, Faith, Opinion, can only justify virtues agreeable to the one who entertains the belief, faith, or opinion.

In order to settle any problem, we must be in a position to demonstrate the truth upon a mathematical basis, or by demonstrating that the contrary is necessarily false we arrive at "truth of necessity."

If the mind is a FORCE resulting from any number of forces, it cannot suffer from disease, because its defect in reaching any standard would be due to the subordinate forces which together compose it. When the "instrument" is diseased, then the impulses arising from it do not "harmonize." If the "discord" could be removed, health would result.

There are millions of perfectly healthy bodies, and hence there are millions of healthy minds, if we may apply the word "health" to a force. If we erect a standard for mind, we will never find any human mind that will come up to it in all respects, because the finest qualities known are distributed in different people,—and if we made a standard out of the best qualities of all known minds, the very next generation may produce others far superior to any of those now living.

What we are certain of is that many various kinds of "impulses" reach the brain, and that they lose their individuality as they assemble. We also know that the entity called MIND, with its many variations, can be traced to the brain as its origin. We must account for the forces—because there is no such a thing as annihilation of any force, although we are quite certain that one kind of force may be converted into another kind, without loss of amount,—and we know that the conversion of one force into another kind of force is always made by means of some kind of "instrument."

We know that the MIND manifests qualities. Where do they come from?

The mind has attributes, powers, faculties, qualities, etc. Where do they come from if not from the FORCES which assemble at the brain, where these manifestations originate?

Where do the impulses of light, sound, feeling, odors, tastes, and "organic" impulses,—also certain chemical, electrical, heat, and grosser physical motions received by different parts of the body, go to? They disappear as such, having assembled into the "machine" with all its living organs in full operation.

Where do emotions, feelings, reason, will, intelligence, instincts, faculties,

thoughts, subconscious mind, and all the qualities of the mind come from if not from the forces which assemble at the brain?

It appears that we are forced to conclude that all of these different manifestations, and all of the phases of mind, are produced by the combination, amalgamation, modification, and separation, accomplished by means of the instrument, which is the body, and especially the brain, of the living being—and that one group of forces originate in the “organism,” another group is impressed upon the living being from “environments,” and that the third group of forces are inherent in the Primordial waves of ether.

If we could find out which of the qualities and faculties come from the “organic,” and also those which belong to the “special senses,” and subtract these two sets from all of the qualities, faculties, and attributes which are discovered in the MIND, we would find out exactly the remainder,—and since there is no other place from which they could come, we would know that they had origin and are inherent in the PRIMORDIAL, which come to the brain in the etheric waves.

The living being is the LOOM which weaves together and classifies the THREE sets of vibrations, which represent three sets of forces; of which the Primordial is the “warp,” whilst the “special sense” and the “organic” groups are the “woof” of the “fabric,” MIND. These THREE sets of FORCES are the legs or feet of the TRIPOD, and the “brain” is the seat of the mind.

All forces are physical, and can be converted into other kinds of forces, although we may denominate them “chemical,” “electrical,” “physiological,” “heat,” “life” forces, mind forces, etc. They all travel in the nerves principally, because the nerves are the best conductors. The mind is a directing force, and has great power in influencing conduct, surmounting difficulties, and converting all other forces, as they act upon matter, into servants. This is the “objective” mind; but the “subjective” mind, or the “subconscious” mind, possesses even more wonderful powers, and it is recognized as an individual force only when the “special senses” have been suspended in their action, and, better still, when the “organic” processes are reduced to a minimum, as in cases of prolonged illness, extreme exhaustion, and even when death is taking possession of the body. Mediums have been well known who could raise heavy pieces of furniture, such as pianos, cupboards, and heavy tables up in the air against the force of gravity, by the power of their “subconscious” mind, and without any physical mechanism to assist them whatever.

They have also projected their own bodies in mid air, and presented themselves to other persons hundreds of miles distant, conversed with them and brought back information, whilst all the time of their absence you could plainly see their bodies before you in the room.

Zeno—That sounds like a fairy tale, and appears contrary to all known

laws of nature. I would like very much to know how such a phenomenon could be explained.

Janus—It is not difficult to understand, when we know that the subconscious mind travels in the etheric waves. Imagine a person 1,000 miles away, and the Medium becomes “en rapport” with him. Now, even the vibrations of light would travel back and forth that distance about 100 times in one second, and there are doubtless ether vibrations many times faster than the vibrations of light. Immediately the person 1,000 miles away becomes aware of the impulses of waves acting upon his consciousness, he immediately perceives the Medium as present, like a vision. Ordinary eyesight requires 1/10th of a second after the vibrations strike the retina before consciousness recognizes them. The delay is due to the interference of the optic nerve along which the time is spent in the approach to the sensorium. Now, if the subconscious mind vibrations immediately excite the brain centers without the use of the optic route, consciousness is excited in exactly the same manner, viz., by the ether vibrations exciting the brain centers, which are the immediate instruments of the mind.

Communication of minds is made direct, information obtained, and as the Medium possesses the remarkable power of placing himself IN the “Vertical Present” and still retaining some use of his “special senses,”—hence he can report what he saw and heard upon his visit.

The other source of the “mind forces,” or perhaps we might say the “organic” mind, is physiological, and is derived from the functioning of the organs, and is as powerful as life itself, and the effect produced upon the mind from this source is very variable, owing to the varying states and conditions of the organs of the body and from the age and development of the body itself, the sex, habits, business, mode of living, and many things which cause variation in the functioning of the separate “instruments” as they work in connection with one another and all as parts of one grand “instrument,” the body itself.

The mind of the child is entirely different from the man in the same individual,—the mind of the Hottentot is hardly comparable with the mind of the highly cultured Caucasian, nor is it capable of the culture of the latter, because the “instrument” is different, or we might say that the “organic” source of the mind is defective. So it is with others.

We can readily trace to the “organic” source the mental variations produced by drugs, alcohol, diseases, habits in the use of narcotics, and even variations of organic functions within the limits of good health. The drugs, alcohol, and disease germs and their products come through the blood right into direct contact with the cells, and even take part in the metabolic processes; hence there is no denying of the fact that these things affect the mind by the “organic” route. Habits acquired are “organic” sources of “mental” variations. The use of drinks, drugs, foods becomes “habitual.”



From the "organic" root of mind forces it is quite easy to trace many so-called "mental diseases"—although it is evident there can be no "mental" disease independent of "organic."

Melancholia, hysteria, paranoia, delusional insanity, emotional insanity, mania, hallucination, idiocy, etc., are all associated with and depend upon the "organic" condition.

Improper action of the liver, where certain products are not manufactured which should be, and other abnormal products become absorbed, hunger or thirst, rich foods and highly seasoned, as well as various drinks, cause many different mental variations, such as ill temper, disgusting habits, dissipation, sensuality, immorality, lies, deceit, theft, murder, and all combinations of these, with idleness, lethargy, crimes, cowardice, ingratitude, and so on.

To overcome or avert these evils, and to insure certain great advantages connected with life, the MIND requires to be "educated," and the brain stored with many "records." The processes of education, and storing the brain with the records, are all performed by the use of the "special senses"—and much expense, labor, and time are spent, very often with extremely uncertain results.

The eye brings into the brain pictures, scenes, sizes, relations of things, etc., and all of these come into the mind as "COLORS." When the impress on the brain has been taken cognizance of by "consciousness," the impression becomes a "MEMORY."

The ear brings in the impressions of "sounds," and if the ear is sensitive and highly developed, it is very surprising how many "memories" can be recorded in the brain by this avenue.

"Touch," accompanied with the sense of feeling, has millions of sentinels placed in the skin, and mucal orifices especially, to bring in information concerning the nature of objects,—their temperature, sharpness, roughness, weight, etc.—and by practice the sense of touch is associated with the very wonderful "reflex" educational system, by which the muscles can be educated to act "automatically."

Taste, and Smell also, minister to education, and are associated with "records" formed in the brain.

There are countless billions of beings living which have not a trace of special senses, yet they carry on the functions of life with great activity. Special senses are evolved gradually in the course of ages, and they have a close relation to the intelligence of the being. They are like "roots" to the tree of knowledge, whose branches, leaves, flowers, and fruit spring up, grow, and elaborate as the brain is fed and supplied with the items of information or nourishment from each of the five great roots.

It is often the case that the knowledge acquired by the special senses is used to foster the "organic" desires, cravings, appetites, etc.; but wisdom

and knowledge may be of inestimable service in guarding and protecting the body from injury, disease, and death.

It is evident from the nature of the function of the special senses, that the degree of perfection of the education and knowledge depends upon the excellence in development and the proper sequence of the groups of impulses which are admitted to the brain by route of these avenues.

For this reason great care is exercised to bring the young through a properly graded series of studies,—but such are not always the best for the individual student, because they develop differently and have various talents, for their brains possess greater development in some regions than in others.

The mental qualities of different persons are closely associated with the variations existing amongst the different special senses belonging to each. When one or more of the senses are absent, as in the deaf-mute, the mind cannot become informed concerning sounds, and accordingly if the deaf-mute makes sounds with the organs of speech, they are incoherent. If blind, the mind cannot learn of colors, distances, and so on, except as informed by the ear or other organs of sense.

It is possible that a SIXTH sense may develop,—and in fact there are some people now living who can perceive the vibrations, or read the thoughts which are passing through the brain of another who is far away.

Zeno—With which do you include the “brain,”—with the special senses or with the organic?

Janus—The brain being the special instrument of the mind, and the meeting place of all the different kinds of vibrations, and owing to its marvelous power to receive, record, and reproduce the impressions which it has received, as the exceedingly delicate and rapid ether vibrations agitate its elements and form the highway between individuals; I believe it is better to class the brain both as an “organ” and as belonging to the “special senses,” because it is immediately related to each.

Some animals possess very highly developed special senses, but have very small brains, and even one special sense may constitute the chief or the most distinctive cause for the kind of mentality they possess.

In all cases the intelligence depends upon the special senses and the brain. If there is absence or deficiency in either, the mind lacks intelligence almost in proportion.

It is due to the perfection of the records in the brain, and the definite relation which these bear to one another, that we are able to remember, reason, think, judge, etc. The brain of a well-bred, well-tutored, healthful, mature man who has been pursuing mathematics, receives different kinds of impressions from the man who had been a student of theology, and the “records” produced in the brain are what makes the difference, other things being equal. It is the same with philosophers, lawyers, physicians, mechanics, scientists, and all men. When we study, therefore, we are the “instruments”



of the currents which pass through the "records" in our brains,—whilst at the same time we continue to make other records just as we acquire new knowledge.

Zeno—You said that the special senses were like roots to the "tree of knowledge," which become developed and elaborated as ideas and knowledge spread out from what one has to new things which the mind is daily acquiring. Do you not think that we also obtain knowledge from the Primordial, since it is of such supreme importance in conveying thoughts, and really forming the basis of the mind; and is not the Primordial more like the root of the tree?

Janus—The Primordial gives life, and quality, and supplies the energies. and like "emotions" it moves to action, and as its attributes become manifest in the lives of others they mould our own,—and as the white light from the sun is divided into colors by the prism, so do our bodies and brains act upon the inherent qualities of the Primordial ether vibrations and thus reveal the character of the Primordial Power,—yet it is the trunk, the essence, the substance of the tree itself rather than the "root" of the tree. It is that upon which the entire structure depends, and renders it possible for either root or branch, flower or fruit, to flourish,—it is the medium extending between all brains, and the mighty ocean of "physiological" mind which vitalizes the Cosmos, and makes it ONE.

When we mix up emotions, instincts, feelings, sympathies, loves, hates, jealousies, fears, desires,—with reason, intelligence, memories, will, knowledge, sensitivities, apprehension, appreciation, agitation, pain and pleasure, theism, contemplation, esthetics, sensuousness, organic functioning, etc., with certain pathological states and conditions, and attempt to explain hypnotism by way of "suggestion," ecstacy as a kind of autohypnotism,—and attempt to form classes of qualities of the mind (considered as an entity), without reference to the THREE distinct sources of the MIND, we become launched upon a sea of mystery so deep and profound that the wisest men will never be able to fathom and practically illumine.

The matter becomes immensely simplified when we recognize that the different phases of the mind are due to the percentage of the different forces present in the composition, and which of them are the most predominant, acting as they must necessarily do upon the "instrument"—the brain, wherein exist the mathematically accurate groups of "records," under the universally acting Primordial vibrations. Insects "inherit" their records, so do men, but the brain of man is highly sensitive and capable of still further EVOLUTION, as it is subjected to new and further impulses.

If you will compare the different attributes of the mind you will find that one of them is above the other, and the relations are almost identical with the colors of the "light spectrum." For instance, consider the attribute "humility,"—observe that it corresponds to the "red," being below the others, and it naturally looks up to all the rest of the attributes as they mani-

fest in the mind of the benefactor, causing it to revere, love, serve, and respect the other mind in which there is "benevolence," purity, love, charity, etc. It is quite natural for one to be grateful to benefactors, who in this comparison would accordingly be placed above on the scale, and perhaps be properly represented by the "green," or middle color of the spectrum. Again, "charity" corresponds with the "violet" on the light spectrum, because it is above all, even "love," as charity is the fruit of love. These and all the others concord with affection, kindness, forgiveness, friendship, humanity, truth, virtue, etc.

Even language attempts to express the relationship between the attributes of the mind, but language is insufficient, because words indicate more definite stages of the "colors," whereas the attributes shade off into each other so gradually that definite limits made by words leave intervals which do not exist. Words are resting places for thoughts, as it were, and indicate certain phases of character capable of being separated. Such attributes pitched upon the spectrum are derived from the Primordial.

Zeno—Where on the "mind spectrum" could you locate the "intellectual"? I would think that the different grades of intellect would be more properly represented by the "colors."

Janus—Upon the light spectrum, you will remember the Fraunhofer lines. It is from these lines that astronomers, physicists, chemists, and scientific analysts learn nearly all they know concerning the "environments" of the earth,—these are the heavenly bodies. Their weight, composition, movements, etc.

These lines are the glyphs which have been flashing their signals to earth for all time, but which have but lately been discovered and their meaning interpreted.

When scientists examine a spectrum which has been very greatly magnified, by means of the modern powerful telescopes, and take photographs of the lines which appear, they find that there are others still finer and finer, which become visible as the spectrum is more magnified. Different gases, such as that from iodine, exposed in the rays thus widely magnified it is observed that the photo plates show special arrangement of the lines for each kind of gas, and at different degrees of magnification. In less diffracted spectra these very numerous lines would have appeared as ONE line, or perhaps two.

Again, when the X ray light is skillfully used in examining the process of crystallization, the ultimate system of the formation of the crystals can be recognized by the radiation and polarization of light rays, and the direction of the outlines of the primitive formation of the crystals can be recognized in the bombardment of the atoms in the molecules.

I mention these things to draw your attention to the extreme delicacy of Fraunhofer lines, and the extreme minuteness of the elementary forms of

matter, as well as the constant system followed by NATURE in and amongst these elementary forms.

By means of such knowledge we may learn to appreciate how inconceivably minute vibrations, acting upon the ultimate elements of LIVING cells in the brain, can leave their impress, and in every respect correspond to Fraunhofer lines in the light spectrum.

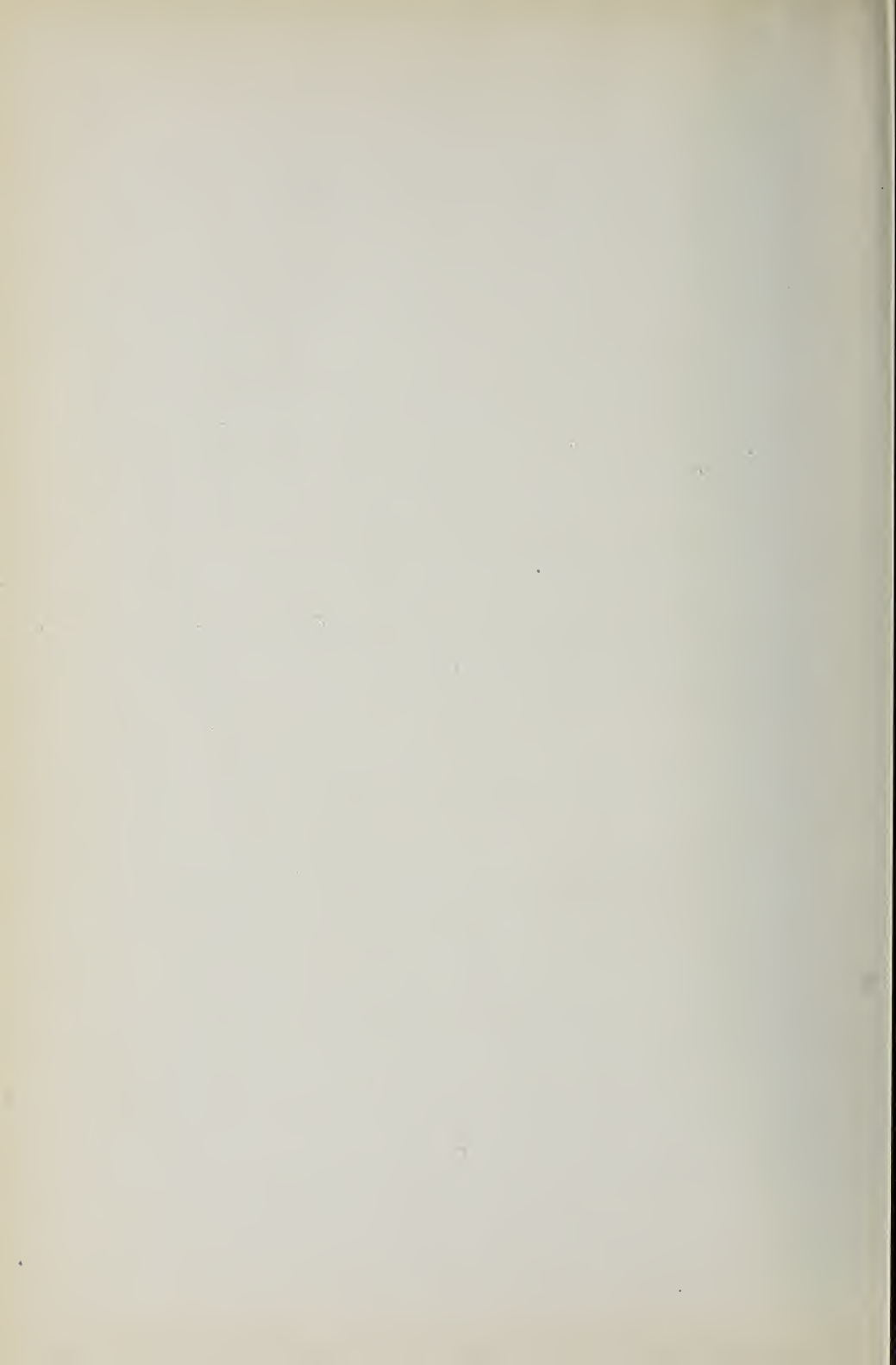
Fraunhofer lines are "interference" lines, caused by the presence of gases in the atmosphere of the sun or star,—and by their interference they prevent the white light of the carbon, of which the body of the sun is made, from shining where the lines appear.

In a similar way, impulses, or rays, coming into the brain, "interfere" and by that interference give us knowledge of what caused them. Thus is "intellect" and knowledge obtained by way of the special senses—sounds, sights, odors, tastes, feelings, leave interference impressions upon the MIND spectrum; and as long as they remain, they are MEMORIES.

Thus the great LIVING universe, like one immense sun, holds the same relation to MIND as our own little sun does to LIGHT.

The LIVING body and brain act as an instrument, to reproduce in another mode of energy, MIND.

The INSTRUMENT does not create either the light spectrum or the MIND spectrum,—yet it combines, amalgamates, diffracts, or otherwise modifies the forces which come to and act upon it.





## CHAPTER 6.

### EXTENSION.

(1) Plato taught that there were THREE forms of energies of the SOUL assigned to man :

- (a) The RATIONAL, which had its seat in the head, and this survived the dissolution of the body.
- (b) The IRASCIBLE, which had its seat in the heart, and was the spring of activity and movement.
- (c) The CONUPISCIBLE, which was the source of the grosser passions and physical instincts, and which died with the bodily organs with which it is united.

(2) Liebnitz revived the theory of Aristotle, who designated by SOUL as that which possessed in itself the principle of its own activity to accomplish its proper end.

According to their philosophy, the universe is made up of MONADS, or forces, each active in itself, and tending by its activity to accomplish its proper end.

They distinguished several kinds of SOUL :

- (a) The NUTRITIVE, by which plants and animals have growth and reproduction.
- (b) The SENSITIVE, which was the cause of sensation and feeling.
- (c) The MOTIVE, which had control of locomotion.
- (d) APPETITIVE, which was the source of desire and will.
- (e) RATIONAL, which was the seat of reason and of intellect.

These powers existed entire in some beings, and in others there was only one of them; MAN had all of them; BRUTES had some; PLANTS only one.

(3) Among modern German philosophers, a distinction is made between soul and SPIRIT.

Some of them claim that the SOUL is the inferior part of our intellectual nature; and the SPIRIT is that part of our nature which tends to the purely rational, the lofty and divine.

(4) Reid uses SOUL as synonymous with MIND. He declared that there is one internal principle, and this principle of thought, he calls the MIND or SOUL of man.

(5) In psychological inquiries, the term MIND is commonly employed to denote that by which we feel, will, know, and reason; or it is the principle of THOUGHT, and activity originating in the body as distinguished from that originating in the MIND.

(6) In philosophic usage, MIND represents the spiritual principle or the

power that originates rational exercise, which receives and interprets all impressions passing into consciousness. BODY represents all that belongs to the human organism, and is interpreted by external observation, under the conditions of chemical and mechanical laws. SOUL was taken as the ordinary expression of MIND. This use still lingers when reference is made to the immortality of the soul.

(7) Plutarch said the SOUL is the cause and beginning of MOTION, and MIND was used regarding the order and harmony with respect to motion.

(8) MATERIALISM regards the soul as a function of the body.

(9) Monism regards the soul as one phase of "substance," of which matter is the other.

(10) Idealism regards the soul as the existence, and not excluding other finite souls, as well as the Divine Being.

(11) Christ made an emphatic distinction between SOUL and Body,—(Matthew 10-28).

(12) Paul distinguished the soul from both body and spirit.

(13) The soul is like the "species" and the "spirit" like the genus.

(14) In ancient Philosophy "spirit" was looked upon as an ethereal and exceedingly attenuated invisible substance, of the nature of breath or air.

(15) Spiritualists believe that the spirits of the dead in various ways communicate with and manifest their presence to man, usually through the agency of a person called a MEDIUM.

Modern Spiritualism is usually considered to have begun about 1848 in the United States, and according to the belief and practices of its adherents, the "communications" or "manifestations" from the "spirit world" take place at "seances," and are in the form of "rappings," "spirit handwriting," etc. And in "dark seances," of partial or complete manifestations in the flesh.

Spiritualism, grounded on consciousness, preserves equally, God, the human person and externa and nature, without confounding them, and without isolating the one from the other.

Spiritualism, whether based on reason, sentiment, or faith, teaches that there are substances or beings, not cognizable by the senses and not revealable through any of the properties of matter, and are therefore SPIRITUAL, as distinguished from MATERIAL. It is opposed to MATERIALISM. By it also man has an immortal spirit and holds moral relation to God as SPIRIT. A spiritualist is one who believes that departed spirits communicate directly with men through the agency of MEDIUMS, and by various signs. One who professes to hold intercourse with departed spirits. They maintain that man does not consist of MIND alone, but he consists of "soul" and "body."

(16) Theosophy is a philosophy built on what is called "inspiration," or "Divine Illumination." The inner revelation of the Divine is considered even superior to the revelation of the Scriptures.

Theosophists mix enthusiasm with observation. It is closely allied to Mysticism. Such names as Paracelsus, Jacob Boehme, and Saint Martin, are popular; whilst Valentin Weigelus, Fludd, and Van Helmon are more philosophical in their doctrines.

Theosophy differs from philosophy in that it starts from a transcendental apprehension of the Deity to explain the Universe,—but does not generalize from the phenomena of the being and attributes of God.

It differs from Mysticism, in that it does not content itself with the relations of the soul to God, but speculates on the constitution and course of nature.

As a frequently recurring tendency of the mind, especially among Orientals, theosophy has appeared in many forms as in the speculations of the old Egyptians and the New-Platonists, the Gnostics, also the Avatars of Brahamism, in Cabalism, and in the speculations of Schelling, Raader, Swedenborg, etc.

It claims to embrace the essential truth underlying all systems of religions, philosophies, and sciences—the UNIVERSAL religion.

Its doctrines may be embraced in (a) Underlying all manifestations is the Infinite, eternal, immutable principle known only through its manifestations, spiritual and material; (b) A unity of consciousness and a unity of law runs throughout the UNIVERSE, embracing the Physical, Psychic, Mental, and Moral PLANES; (c) The essential Divinity is in PAN, and the progression of the DIVINE RAY proceeds through all the kingdoms up to man, and beyond man as we know him up to beings of a God-like perfection. The evolution taking place by means of successive re-imbodiments or reincarnations, and according to the laws of cause and effect.

(17) Mysticism, the doctrine that man may attain to an immediate direct consciousness of knowledge of God, as the real and absolute principle of truth.

In Gnosiology is the doctrine that truth is attainable without the aid of the senses, and the progress of thought and reason.

(18) Dogmatism claims the “a priori” knowledge. That is that certain forms of knowledge exist prior to experience in logical order,—springing from first truths, self evident and essential to intelligence, recognized independent of experience;—or those elements of knowledge which are not obtained “a posteriori,” which are derived from experience.

This abstract reasoning from a given NOTION to the conditions which such a notion involved.

Or it might be said that there is FAITH in the presumption of reason, or “a priori” principles assumed as a basis of philosophy or philosophic deductions, without any adequate criticism or knowledge thereof. It is directly opposed to critical dialectic and empiric methods. It maintains that knowledge can be attained by the right use of our faculties.



It is opposed to Scepticism, which holds truth attainable by renouncing reason.

(19) Christianity proclaims one God, and one Mediator between God and Man.

(20) Brahamism teaches that there is a supreme soul in the universe, self existent, and eternal, from which all things emanate and to which all return.

Brahm, the Creator and ruler of the world, phenomenal god is in this sense spoken of as the active creator, but he receives no worship.

The world is regarded as a whole and is worshipped in its various elements and forms, as a manifestation of the one indivisible, eternal Brahm or absolute being.

Brahm is the Supreme Creator, the first of the Hindu Triad. In these three persons the one God is shown, each first, each last, not one alone,—Siva, Vishnu, Brahm, each may be first, second, or third among the blessed three.

(21) Buddhism is a mystic and ascetic religious faith, which originated in northern Hindostan, as a reformation of Brahamism, or the old Hindu Pantheism.

It is widely prevalent in central and southern Asia.

All Buddhists do not believe in a personal God, some hold that Buddhi, or the principle of Divine intelligence has become incarnate in some illustrious and holy men.

Their religion proposes a method of attaining to a state called Nirvana.

In the Buddhists' temples the doctrine of Gotama Buddha are inculcated, and an order of itinerant monks, under vows of celibacy and poverty, exemplify and promote this faith.

Buddhism is considered an advanced improvement of Brahamism. It adds that Brahm is a proposed method of escape from perpetual round of life and death into Nirvana, or the Buddhist perfect life of heaven.

Its central idea is the selfish salvation of the individual soul from the rounds and changes of continued earthly existence by contemplation of truth and good works. Death is its salvation, and personal annihilation its heaven.

Zeno—It is strange how so many very different kinds of branches have sprung from the tree. One would naturally think they should be more nearly alike, since there is but one kind of a body for all humans, and surely the mind, soul, or spirit, or what they might conclude to call it, must be associated with the body of each in exactly the same manner. And we know very well that "believing" in one thing or another does not make the slightest difference to the truth of it. For instance, if one believes that the earth is flat or square, that belief does not change the shape of the earth, which remains as it is anyway. There is always the same relation existing between the Governing power of the universe and man, no matter what any one believes

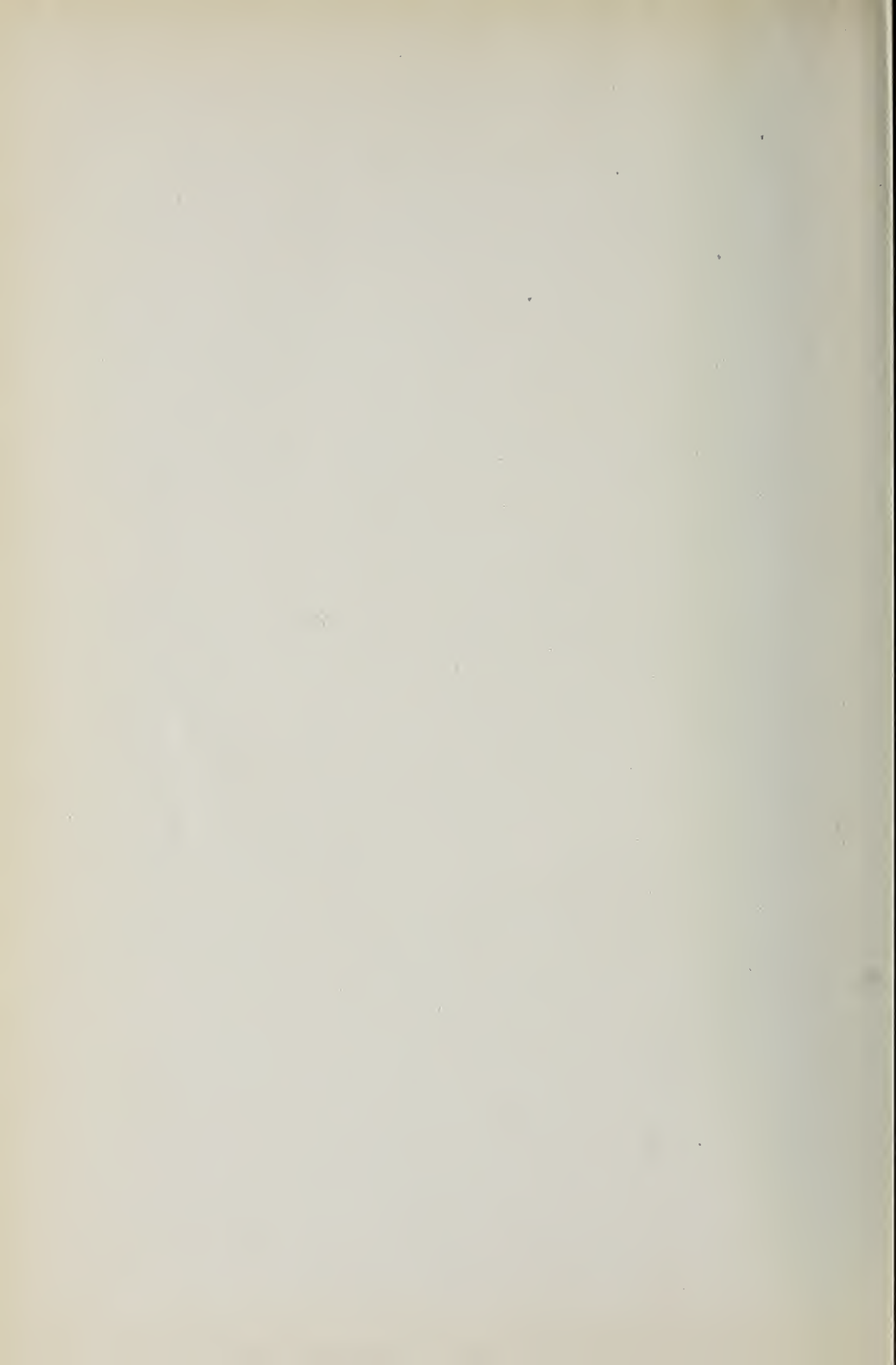


concerning it,—the earth keeps flying through space at a terrific speed all the time, always going somewhere but never getting there, it cannot get near any other planet or sun, and if it did it would be utterly destroyed, and it never loses any weight but rather increases by the addition of meteors. We must all have been formed by the same process, and from the same materials.—and it would seem to me that all must encounter a similar end, if there ever could be any end of the evolving process.

Janus—It is all due to the direction of the growth of the branches of the “tree of knowledge.” and when we come to recognize that the MIND of man arises from THREE different sources, and the phases and phenomena of the mind depend upon the relative proportion of the different series of forces from these three sources and that the RESULTANT of the combination is what constitutes what we recognize as MIND, there will be no further difficulty in learning all about the SOUL and SPIRIT and all the peculiarities presented in the many and various manifestation of MIND force, and including what we usually regard as different kinds of mind,—subconscious,—unconscious,—objective,—instinct.—Primordial,—rational,—emotional,—hypnotic,—ecstatic, etc.

When this is clearly understood there will be only ONE kind of religion, and it will accordingly be founded upon that which can be demonstrated to be true, and necessary, according to the known truths of experience and science. Then, too, will there be peace and plenty, because the greatest of all causes of enmity, and strife will dissolve and disappear, and the brotherhood of man will be established upon the basis of understanding of the truth, the world will be one grand country, from whose different STATES or countries representatives will meet as of one people under the banner of peace and good will, because all the world shall know the true nature of the combination of the body and mind, and it will not be necessary for the people to be persuaded into BELIEFS, which are too often associated with error, skepticism, fanaticism, and superstition.

The widely diverging opinions entertained indicates that the location of the divergence is at the very “root” of the tree, and that is exactly where the MIND emerges from the “machine,” the BODY.



## OBSERVATIONS.

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1. Every form of matter and every mode of energy which exists, does so only in the PRESENT.

2. The "present" existence of all matter, and the "present" action of all forces in the universe, and the impossibility of anything that "exists," or any force which "acts" in the present, existing or acting at the same time in either the "past" or "future," establishes the "present" or immediate relationship which exists between all matter and all energy. This same "present" relationship has evidently always been maintained, and must forever continue.

3. The word "time," when not qualified by some other word, is used herein to mean the same thing as we usually apply to eternity, being of infinite duration.

4. The "past" includes all extent of time up to the present, and the "future" includes all beyond the present, yet the line of TIME being infinite in the length of its duration and continuous, it follows that the PAST AND FUTURE are equal to each other, and as the time line (eternity) is an infinity of duration, unbroken, and indivisible, therefore the "present" must be but a "point" in the line.

5. As far as MATTER and ENERGY are concerned, there never was a past, nor can there be a future, because they both always remain IN the PRESENT, and as the past and future are continuous in the line TIME, it follows that "PRESENT time" is but a CONCEPTION of the mind.

Our conception of SPACE is that of infinity also, yet the separation existing between the bodies of matter in space, even that of infinity, does not remove any particle of matter, nor any mode of energy, from the present. For instance: an undulation, or wave, is produced in the ether which fills all space, let us say 100,000,000,000 miles distant from us, the head of the wave approaching us continues to move in present time, all the way from the point where it commenced until it reaches us, perhaps in about twenty years from now. All subsequent vibrations originating at the same place also continue to travel in the present time, and will also reach us strictly in PRESENT time. The same is true of all other vibrations from any source.

6. All *real knowledge* is based upon primary self-evident truths.

7. All *truths* in the universe agree with all other truths.

8. No mind can be FREE to admit truth if swayed by BELIEF to any degree.

9. The *object of science* is to find the truth, understand the relations of things, and classify experiences.

10. *Philosophy* should be based on self-evident truths, free from beliefs, yet it should recognize all facts pertaining to any particular subject.

11. The discovery of a *Natural Law* is achieved by *SYNTHETIC* reasoning, in which there must be a philosophic general survey of scientific discoveries. A scientist, whose mind is principally occupied in one particular line of investigation, is not liable to recognize a *New* natural law, until it has been brought to his attention.

12. There is no way by which a natural law can be known, except from the fact that the hypothesis purporting to be the natural law is sufficient to explain, or account for, all known facts pertaining to its operation. Hence as soon as new facts, or new phenomena are discovered, which the hypothesis will not explain, then some other hypothesis should be sought for which will explain all, or account for all.

13. Any *hypothesis* is useful in proportion to the number and importance of the facts and phenomena which it will explain, and according to the self-evident simplicity of the hypothesis. It is like a mathematical instrument, by means of which certain facts pertaining to its operation can be tested.

14. All *truths* exist independent of man, who may discover, and apply, but cannot generate them. They are, as it were, *OUTSIDE* of man, and might be compared to the *LIGHT* entering the mind by way of the understanding, which, in turn, might be compared to the eye which admits the light.

15. *Knowledge* is truth which has reached the mind, by way of the understanding, and when knowledge is acquired it dispels the mystery connected with "belief."

16. *Belief* is a conviction of truth on the part of the person entertaining the belief, but is of such a nature that it cannot be proven, or, at least, has not been proven up to the present, so far as the mind of the believer is concerned.

17. When a belief is proven to be a truth, then it becomes *KNOWLEDGE*, and is no longer a "belief," because it is knowledge, which does away with the necessity of belief. Belief leaves one in some degree of darkness, but knowledge implies understanding of the "light of truth," and is such that it can be proven by the power of reason.

18. If the earth be compared to a "garden," the *LIFE* which animates each person is like a *TREE*, set in the midst of the garden, because each living being occupies a position in the center of all others, which are distributed about it, as from a center.

The energies of the "life tree" permeate trunk and limb completely, and although we may with advantage protect it, and supply its needs, we may not in any way detract, abort, or frustrate its energies—"Lest ye die."

19. From the "living tree" grows another, the "Tree of Knowledge," which, like the former, is set in the midst of the garden; it grows, ramifies into branches, with "association of ideas," brings forth its leaves, flowers



and fruit, by the energies of what we call the MIND. This tree may also be guarded, fostered and supplied with that which is beneficial for it, favoring its growth, power and resources, as well as its utility, and from it we may sometimes pluck such fruits as good works, benevolences, charities, love, kindnesses, humanity, whilst it bows its venerable head with humility, reverence and respect. Or its growth and powers of production may be blighted by outside influences, deceit, fraud, sensuality, idleness, immorality, etc., or choked with noxious foul environments, and its fruit become pernicious and injurious to both LIFE and MIND.

20. Ether is the term used to designate that imponderable essence which pervades all space. Its infinite stores of energies are conveyed throughout all space by means of undulations, or vibrations, whose amplitude and rapidity vary from the zero to infinity. These vibrations or waves of ether are produced by the impulses which it receives from the impact of the elements and bodies of matter which impinge upon it.

By virtue of its perfect continuity and extreme rarity, ether penetrates throughout all bodies and forms of matter; hence every cell in the brain, with its millions of molecules, atoms and electrons, is, as it were, enveloped, permeated and completely saturated with the ether. From its nature, energies and movements, and the rapid motion of the earth, we will find ample cause for both life and mind.

21. *Once it was contended* that the mind could not act where it was not present, and that, consequently, it cannot be said to perceive external objects themselves, but only their images, forms or sensible species, presented to it in the same manner in which images are formed in the camera obscura. By the internal functions of mind these sensible species were then supposed to be refined into phantasms, objects of memory and imaginations, etc., and these again, after undergoing further processes, became intelligible, and objects of pure intellect. Bishop Berkley maintained that "as the mind can perceive nothing but its own impressions or images, we therefore derive no evidence from our senses of the existence of the external world." Hume maintained that "we have little proof of the existence of mind, and that nothing exists in the universe except impressions and ideas." The term Egoist was applied to some of the followers of Descartes, who concluded, from his doubt, that no man can have full assurance of anything but his own individual existence.

Such doctrines were combated and exposed on the principle that they were mere fictions of philosophy, and that a confidence in the information conveyed to us by our senses must be considered as a first truth, or a fundamental law of our nature susceptible to no explanation, and admitting of no other evidence than that which is derived from the universal conviction of mankind.

The philosophers, who supported the theory, showed the same confidence in the evidence of their senses as other men did.

Nearly all philosophers, from Plato to Hume, agreed in maintaining that the mind does not perceive external things themselves, but only their images, ideas or species. This doctrine was founded upon the maxim that the mind cannot act where it is not present.

One writer, admitting the maxim, maintained that the mind, in perceiving external things, leaves the body and comes into contact with the objects of its perception.

Speculations have been made that an essence existed, of which some supposed the mind was composed. The manner in which thought was produced and the means by which intercourse is carried on between minds, and between the mind and external objects, were supposed to be explained by this essence, called "animal spirits," which, being in constant motion, performed the office of messengers between the brain and the organs of sense.

Others explained the mind upon their theory of a nervous fluid, by vibrations of nerves, or by a subtle essence resembling electricity or galvanism.

The mind has been compared to a camera obscura, to a mirror, and to a storehouse.

The mind is like nothing else in nature, and is likely to suffer by comparison with other things, and it becomes evident, from the great variety of opinions and beliefs, which have during all time been entertained, that no fixed and definite explanation, which has been given, has been sufficient to satisfy the human sense of correctness; but that is no reason why we should not continue to try to discover the correct explanation thereof.

## CHAPTER 7.

### VOCABULARY.

1. *The Great Divide* refers to the "present," which is conceived of as dividing the "past" from the "future."

2. *The Tripod* is a term used to express the combination of the THREE feet or legs, each of which represents a separate series of forces, which assemble at the brain principally, and by their combination become manifest as mind, which latter is therefore a RESULTANT of the combined forces.

3. *Time*, as used in this work, implies "eternity," being of infinite duration, yet appealing to our conception as if composed of "past," "present" and "future."

4. *Time Measure* is a straight hypothetical instrument, of infinite length, but of any lateral or transverse thickness. This hypothetical measure is divided into two equal parts by the conception of "present time," which always divides the "past" from the "future."

5. *Mind*, the resultant of the combination of certain forces, which have been mingled together, and modified as they have passed through the "instrument," and varying as the respective forces vary, and also by the quality of the living machine through which the forces pass.

6. *Objective Mind* is the conscious mind which is associated with an "object" or concept. Its goal is success and happiness; it "faces the future," and involves all THREE sets of forces, its subjective origin in the brain being the focal center of consciousness, from which thought arises.

7. *Subjective, Subconscious, Subliminal, Unconscious Mind* are terms used heterogeneously, to imply the combinations of "mind forces," independent of the immediate action of the "special senses."

This phase of MIND is much better recognized when the "organic" set of forces are very weak, such as results from prolonged fasting, and some kinds of sickness; and is practically independent of the "focal center" of consciousness in the brain; and it is produced by PRIMORDIAL forces passing through the "records" in the brain.

8. *Primordial Mind*, that which belongs to the forces of the universe, and becomes manifest in individuals as the "subconscious" or "subliminal" mind.

9. *Hypnotic Mind* "faces the past" and is caused by the attention being centered upon the last impression made upon the conscious brain; it is deprived of its "future" side association of ideas; for this reason the subject is unable to make direct connection between the "New truth" last implanted in his brain "records" and what he had previously learned.

10. *Light*, that form of radiant energy conveyed by the undulations of

ether, which, after impinging upon the retina and passing as impulses to the brain, becomes manifest to consciousness as "color."

The same undulations, acting upon a plant, for instance, do not produce LIGHT to the plant, any more than they would to a blind person. Light is therefore a subjective mental sensation.

11. *Primordial Vibrations* are the infinite number and variety of waves or undulations constantly present in the ether of all space, and conveying radiant energy in every direction. They are practically independent of our own sun and solar system, although the latter have immediate relation to life and being.

Primordial vibrations furnish the basic element in the MIND; produce the "subjective" or "subconscious" mind by acting upon and passing the "brain-records"; and form the medium for the distribution of the PRIMORDIAL mind, appreciated as that of the CREATOR.

*Solar Molecule*, the group of more or less independent separate bodies, yet moving in space as a group or system, like our "solar system," and having a sun, a star, or one of the "dark bodies" (which correspond to a sun cooled down) as the central or positive element of each "solar molecule," about which a variable number of planets, moons, comets and satellites revolve. THE SOLAR MOLECULE pursues some orbit of its own. The universe might be regarded as ONE organized BEING, formed of "solar molecules," in a manner similar to the way in which all known substances are composed of molecules, in which the "negative electrons" or "corpuseles" correspond to elements; and the moons, planets, satellites correspond to the separate "atoms" in the molecule.

12. *Brain-Tent*, an imaginary tent-shaped arrangement of the cells of the brain, in order to illustrate how the "ether currents" focalize to the "conscious center," or "INSIDE focus," in contrast with the OUTSIDE focus, which is the object of thought in the conscious mind.

13. *Big Wheel*, a hypothetical vertical plane, represents the PRESENT, and extends entirely across all space; it runs at right angles to the TIME LINE, and includes all things which do exist, in their location as regards TIME.

14. *Present Time* is a mental conception of the relativity of events, and does not exist as an entity, any more than a mental impression of sound exists as an entity. It is as universal as SPACE is, and neither MATTER nor FORCE of any kind ever existed or operated in any other but the PRESENT TIME, and never can. THE UNIVERSE of elements and energies are OMNI-PRESENT.

15. *Light Spectrum*, or spectrum of light, like the rainbow, consists of seven principal colors, which grade into each other, or are not separated by very distinct divisions. It is formed from the "light" producing rays from the sun or star by separating them with a prism, and having the



reflected "colors" projected against a curtain or reflector of some kind. The light spectrum is interrupted by very narrow dark transverse lines—Fraunhofer lines—caused by the presence of metallic vapors in the gaseous envelope of the sun, etc.

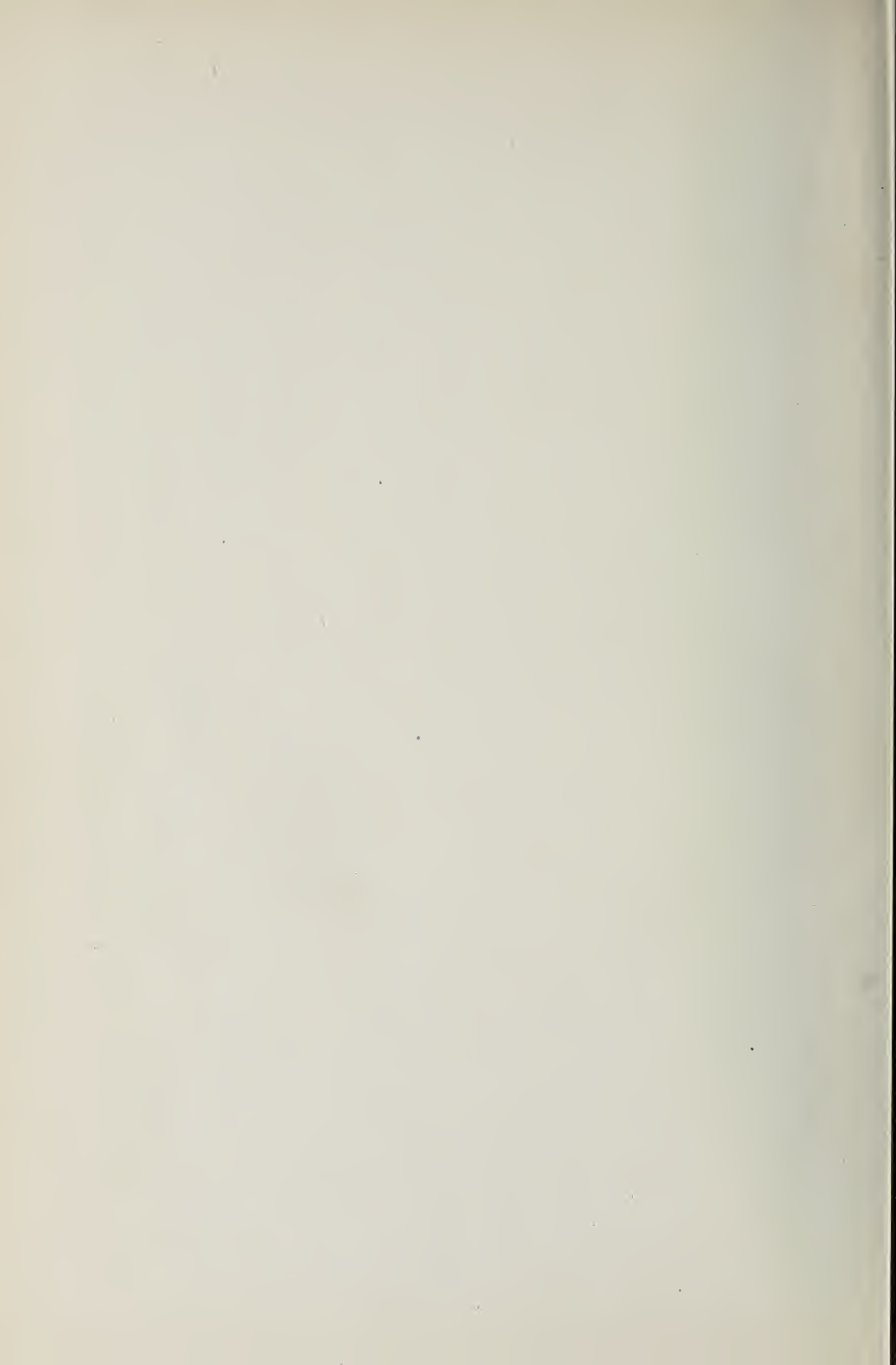
16. *Mind Spectrum* consists of the attributes of MIND, derived from PRIMORDIAL vibrations, which belong to the universe, and more or less reflected by the "face and features." The "instrument," corresponding to the "prism," is the living being, especially the brain.

Information, which is derived from the "special senses," leaving certain "records" in the brain, being the source of the "Fraunhofer" lines in the "mind spectrum."

—————FINIS—————











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